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**FIGURE 1**

ATGGCTTTTAGAGATCCACATGTGCAGACCCCATGTGCCTCATCGAGAACTTTAATGAGCAGCTGAAGGTTAATCAG  
GAAGCTTTGGAGATCCTGTCTGCCATTACGCAACCTGTAGTTGTGGTAGCGATTGTGGCCCTCTATCGCACTGGC  
AAATCCTACCTGATGAACAAGCTGGCTGGGAAGAAACAAGGGCTTCTCTGTGTGCATCTACGGTGCAGTCTCACACC  
AAGGGAATTTGGATATGGTGTGTGCCTCATCCCAACTGGCCAAATCACACATTAGTTCTGCTTGACACCGAGGGG  
CTGGGAGATGTAGAGAAGGCTGACAACAAGAATGATATCCAGATCTTTGCACTGGCACTCTTACTGAGCAGCACC  
TTTGTGTACAATACTGTGAACAAAATTGATCAGGGTGCTATCGACCTACTGCACAATGTGACAGAACTGACAGAT  
CTGCTCAAGGCAAGAAACTCACCCGACCTTGACAGGGTTGAAGATCCTGTGACTCTGCGAGCTTCTTCCAGAC  
TTAGTGTGGACTCTGAGAGATTTCTGCTTAGGCCTGGAAATAGATGGGCAACTTGTACACCAGATGAATACCTG  
GAGAATTCCTAAGGCCAAAGCAAGGTAGTGATCAAAGAGTTCAAAATTTCAATTTGCCTCGTCTGTGTATACAG  
AAGTTCTTTCCAAAAAAGAAATGCTTTATCTTTGACTTACCTGCTCACCAAAAAAAGCTTGCCCAACTTGAAACA  
CTGCCGTGATGATGAGCTAGAGCCTGAATTTGTGCAACAAGTGACAGAATTTCTGTTCTTACATCTTTAGCCATTCT  
ATGACCAAGACTCTTCCAGGTGGCATCATGGTCAAATGGATCTCGTCTAAAGAACCTGGTGCTGACCTATGTCAAT  
GCCATCAGCAGTGGGGATCTGCCCTTGATAGAGAAATGTCAGTCTTGGCTCAGAGAGAGAACTCAGCTGCA  
GTGCAAAAGGCCATTGCCCACTATGACCAGCAAATGGGCCAGAAAGTGCAGCTGCCCATGGAAACCTCCAGGAG  
CTGCTGGACCTGCACAGGACCAGTGAGAGGGAGGCCATTGAAGTCTTCATGAAAACTCTTTCAAGGATGTAGAC  
CAAAGTTTCCAGAAAGAATTGGAGACTCTACTAGATGCAAAACAGAAATGACATTTGTAAACGGAACTTGGAAAGCA  
TCTCTCGGATTATTGCTCGGCTTTACTTAAGGATATTTTTGGTCTCTAGAAAGCAGTGAAGCAGGGAATTTAT  
TCTAAGCCAGGAGGCCATAATCTCTTCATTGAGAAACAGAAAGAACTGAAGGCAAAGTACTATCGGGAGCCTCGG  
AAAGGAATACAGGCTGAAGAAGTTCTGCAGAAATATTTAAAGTCCAAGGAGTCTGTGAGTCATGCAATATTACAG  
ACTGACCAGGCTCTCACAGAGACGGAAAAAAGAAAGAAAGGCCACAAGTGAAAGCAGAAAGCTGAAAAGGCTGAA  
GCGCAAAGGTTGGCGGCGATTCAAAGGCAGAACGAGCAAATGATGCAGGAGAGGGAGAGACTCCATCAGGAACAA  
GTGAGACAAATGGAGATAGCCAAACAAAATTGGCTGGCAGAGCAACAGAAAATGCAGGAACAACAGATGCAGGAA  
CAGGCTGCACAGCTCAGCACAAACATTCCAAGCTCAAATAGAAGCCTTCTCAGTGAGCTCCAGCACGCCCAGAGG  
ACTGTTAATAACGATGATCCATGTGTTTTACTCTAA

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**FIGURE 2**

MALEIHMSDPMCLIENFNEQLKVNQEALEILSAITQPVVVVAIVGLYRTGKSYLMNKLAKGNKGFVASTVQSHT  
KGIWIWCVPHPNWPNTLVLLDTEGLGDVEKADNKNDIQIFALALLSSTFVYNTVKNIDQGAIDLLHNVTELT  
LLKARNSPDLDRVEDPADSASFPPDLVWTLRDFCLGLEIDGQLVTPDEYLENSLRPKQGSQDQVQNFNLPRLC  
KFFPKKKCFIFDLPAHQKKLAQLETLPPDELEPEFVQQVTEFCSYIFSHSMTKTLPGGIMVNGSRLKNLVLTYVN  
AISSGDLPCIENAVLAQAQRENSAAVQKAIHYDQQMGQKVQLPMETLQELLDLHRTSERAIEVFMKNSFKDVD  
QSFQKELETLDDAKQNDICKRNLEASSDYCSALLKDFGPLEEAVKQGIYSKPGGHNLFIQKTEELKAKYYREPR  
KGIQAEEVLQKYLKSKESVSHAILQTDQALTETEKKKKEAQVKAEAEKAEQAQLAAIQRQNEQMMQERERLHQEQ  
VRQMEIAKQNWLAEEQKMQEQQMQEQAQLSTTFQAQNRSLSELQHAQRTVNNDPCVLL

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**FIGURE 3**

AGCAGGTTTCGAATGCTCTTTACTTCCTTTGTGGAGCAAAAGAAAAAGCAGGAGTATTTGAACAAATCACTAAG  
ACTCATGGAACAATTATTGGCATTACTTCAGGGATTGTCTTGGTCCTTCTCATTATTTCTATTTTAGTACAAGTG  
AAACAGCCTCGAAAAAAGGTCATGGCTTGCAAAACCGCTTTTAATAAAACCGGGTTCCAAGAAGTGTGATCCCT  
CCTCATTATGAAGTGTCTTCACTAAGGGACAAAGAGATTTCTGCAGACCTGGCAGACTTGTGCGGAAGAATTGGAC  
AACTACCAGAGGATGCGGCGCTCCTCCACCGCCTCCCGCTGCATCCACGACCACCACTGTGGGTGCGAGGCCTCC  
AGCGTCAAACAAAGCAGGACCAACCTCAGTTCCATGGAGCTTCCTCTCCGAAATGACTTTGCACAACCACAGCCCA  
ATGAAAACATTTAATAGCACCTTCAAGAAAAGTAGTTACACTTTCAAACAGGGACATGAGTGCCCTGAGCAGGCC  
CTGGAAGACCGAGTAATGGAGGAGATTCCCTGTGAAATTTATGTCAGGGGGCGAGAAGATTCTGCACAAGCATCC  
ATATCCATTGACTTCTAATCTTCTGCTAATGGTGATGTGAATTTCTTAGGGTGTGTACGTACGCAGCCCTCCAGGGC  
ACCATACTGTTTCCAGCAGCCAACCCCTTTCTCCCATCACAACTACGAAGACCTTGATTTACCGTTAACCTATTG  
TATGGTGATGTTTTTATTCTCTCAGGCAGTCTATATATGTTAAACCAATCAAGGAACCTTACTCTATTTCAGTGGAA  
ACAATAATCATCTCTATTGCTTGGTGTCAATTTATAGGAAGCACTGCCAGTTAAAGAGCATTAGAAGAGGTGGTTG  
GATGGAGCCAGGCTCAGGCTGCCTCTTCGTTTTAGCAACAAGAAGACTGCTCTTGACTGATAACAGCTCTGTCAA  
TATTTTGATGCCACAATAAACTTGATTTTCTTTACATTCCCTTTTATTTTCTCTTCTCTAAATTTAATTTGTTT  
TATAAGCCTATCGTTTTACCATTTTCAATTTTCTTACATAAGTACAAGTGGTTAATGTACCACATACTTCAGTATAG  
GCATTTGTTCTTGAGTGTGTCAAAATACAGCTAGTTACTGTGCCAATTAAGACCCAGTTGTATTTACCCATCTG  
TTTCTTCTGGCTAATCTCTGTACTTCTGCCTTTTAATTAAGTGGGCCCTTATTCCTTATTTTCTGTGAGAAATAA  
TAGATGATATGATTTATTACCTTTCAATTATATTTTCTCAGTTATACTAGAAAATTTTATAATCCTGGGATATA  
TGTACCATTGTCAGCTATGACTAAAAATTTGAAAAAGATAAAAAATTTCTAGCAAGCCTTTGAAGTTTACCAAGTA  
TAGTCACATTGAGTGACAGCCCATTCATTCCAGTAAAGAATCATTTCATTCACCTTTGGGAGAGGCCTATAATTAC  
ATTTATTTGCAATGTTTCTCTTCGCTAGATTGTTACATAGCTCCCATTTCTGTTGGTTTTGCTTACAGCATATGGT  
AACCAAGGTTAGATGCCAGTTAAAATTCCTTAGAAATTTGGATGAGCCTTGAGATTGCTTCTTAACTGGGACATGA  
CATTTTCTAGCTCTTATCAAGAATAACAACCTTCCACTTTTTTTTAACTGCACTTTTGACTTTTTTTATGGTAT  
AAAAACAATAATTTATAAACATAAAAGCTCATTGTGTTTTTTAGACTTTTGATATTATTTGATACTGTACAACT  
TTATTAAATCAAGATGAAAGACCTACAGGACAGATTCCCTTCAGTGTTACATCAGTGGCTTTGTATGCAAATAT  
GCTGTGTTGGACCTGGACGCTATAACTTATTGTAAAGACCTTGGAATGTGGACATAAGCTCTTTCTTTCTTTT  
GTTACTGTATTTAGTTTGTGATAAATTTTCACTGTGTGATATTTATGCTCTAAATCACTACACAAATCCCATAT  
TAAATATACATTGTACCTGACCCTTTAATCATGTTATTTATGCCACCAAGGTTGTGGATCTTAAGGTATGTATG  
GAAAGGAACCTATTTATCAAATTGTAAGTAATACAGACATGCCATTTAAAAGAGGTAAATTCCTGTTTTCTATAT  
TTTGTTAGTAAATTTCTCAATGAAATAAGTTGAAGTTTCACTGGATTTCAATTAACTTTTAAATATTACATATATGT  
GTTTTCTCAGATTAGTGAAAATTTGTGACCTTAAATTTAATACACATATACTGCCTCAG

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**FIGURE 4**

MLFTSFVEQKKKAGVFEQITKTHGTIIGITSGIVLVLLIISILVQVKQPRKKVMACKTAFNKTGFQEVFDPPHYE  
LFSLRDKEISADLADLSEELDNYQRMRRSSTASRCIHDHHCQSQASSVKQSRTNLSSMELPLRNDFAQPQPMKTF  
NSTFKKSSYTFFKQGHECPEQALEDRVMEEIPCEIYVRGRED SAQASISIDE

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**FIGURE 5**

TCTGGGCGCGCGCGACGTCAGTTTGTGTTCTGTGTCTCCCCGCCCCTGTCCCGCCCGACCCGCGCCCGCGATGC  
TGGCGCTGCGCTGCGGCTCCCGCTGGCTCGGCCTGCTCTCCGTCCCGCGCTCCGTGCCGCTGCGCCTCCCCGCGG  
CCCGCGCCTGCAGCAAGGGCTCCGGCGACCCGTCTCTTCCTCCTCCTCCGGAACCCGCTCGTGTACCTGGACG  
TGGACGCCAACGGGAAGCCGCTCGGCCGCGTGGTGCTGGAGCTGAAGGCAGATGTCTGTCCTCCAAAGACAGCTGAGA  
ACTTCAGAGCCCTGTGCACTGGTGAGAAGGGCTTCGGCTACAAAGGCTCCACCTCCACAGGGTGATCCCTTCCT  
TCATGTGCCAGGCGGGCGACTTCACCAACCACAATGGCACAGGCGGGAAGTCCATCTACGGAAGCCGCTTTCCTG  
ACGAGAACTTTACTGAAGCACGTGGGGCCAGGTGTCCTGTCCATGGCTAATGCTGGTCCCTAACACCAACGGCT  
CCCAGTTCTTCATCTGCACCATAAAGACAGACTGGTTGGATGGCAAGCATGTTGTGTTTCGGTCACGTCAAAGAGG  
GCATGGACGTCGTGAAGAAAATAGAATCTTTCGGCTCTAAGAGTGGGAGGACATCCAAGAAGATTGTCATCACAG  
ACTGTGGCCAGTTGAGCTTAACTCTGTGGCCAGGGTGCTGGCATGGTGGCAGCTGCAAAATGTCCATGCACCCAGGTG  
GCCGCGTTGGGCTGTCAGCCAAGGTGCCTGAAACGATACGTGTGCCCACTCCACTGTCACAGTGTGCCTGAGGAA  
GGCTGCTAGGGATGTTAGACCTCGGCCAGGACCCACCACATTGCTTCTTAATACCCACCCCTTCCTCACGACCTCA  
TTTCTGGGCATCTTTGTGGACATGATGTCAACCCACCCCTTGTCAAGCATTGCCTGTGATTGCCAGCCCAGATTCTC  
ATCTGTGCCTTGGACATGGTGATGGTGATGGGTGGCCATCCAAGTGAAAGTCTTTTCCTTGACCAAGGGGGACAG  
TCAGTTTTGCAAAAGGACTCTAATACCTGTTAATATTGTCTTCCTAATTGGGATAATTTAATTAACAAGATTGA  
CTAGAAGTGAACTGCAACACTAACTTCCCCGTGCTGTGGTGTGACCTGAGTTGGTGACACAGGCCACAGACCCC  
AGAGCTTGGCTTTTGAAACACAACCTCAGGGCTTTTGTGAAGGTTCCCCGCTGAGATCTTTCCTCCTGGTTACTG  
TGAAGCCTGTTGGTTTGCTGCTGTCGTTTTTGAGGAGGGCCCATGGGGGTAGGAGCAGTTGAACCTGGGAACAAA  
CCTCACTTGAGCTGTGCCTAGACAATGTGAATTCCGTGTGTTGCTAACAGAAGTGGCCTGTAAGCTCCTGTGCTCC  
GGAGGGAAGCATTTTCCTGGTAGGCTTTGATTTTTCTGTGTGTTAAAGAAATTCAATCTACTCATGATGTGTTATG  
CATAAAACATTTCTGGAACATGGATTTGTGTTACCTTAAATGTGAAAATAAATCCTATTTTCTATGGAAAAAA  
AAAAAAAAAAAAAAAA

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**FIGURE 6**

MLALRCGSRWLGLLSVPRSVPLRLPAARACSKGSGDPSSSSSSGNPLVYLDVDANGKPLGRVVLELKADVVPKTA  
ENFRALCTGEKGFGYKGSTFHRVIPSFMCQAGDFTNHNGTGGKSIYGSRFPDENFTLKHVGPVLSMANAGPNTN  
GSQFFICTIKTDWLDGKHVVFGHVKEGMDVVKKIESFGSKSGRTSKKIVITDCGQLS

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**FIGURE 7**

TGTTCTTGAGCCCAGCTTCTTCTCGTCTCCACCCCAGCTTCCCGGCATTGGAAGAAGGGACCGTCTCTTCCTT  
GTCTTGGCCACCCAAATCCTGGTATCGAAAGGGTTGAACGGACCGGAAGTGTGCAGCAGCGACGGGTCCCCAGCT  
AATCGACGCCGGAAGTAGCAATTACTAGACAAGCATTCCGCCGCCGGCTTCGCTATGGCGGCAATTCCCCCAGAT  
TCCTGGCAGCCACCCAACGTTTACTTGGAGACCAGCATGGGAATCATTGTGCTGGAGCTGTACTGGAAGCATGCT  
CCAAAGACCTGTAAGAACTTTGCTGAGTTGGCTCGTCGAGGTTACTACAATGGCACAAAATTCCACAGAATTATC  
AAAGACTTCATGATCCAAGGAGGTGACCCAACAGGGACAGGTCGAGGTGGTGCATCTATCTATGGCAAACAGTTT  
GAAGATGAACCTTCATCCAGACTTGAAATTCACGGGGGCTGGAATTCTCGCAATGGCCAATGCGGGGCCAGATACC  
AATGGCAGCCAGTTCTTTGTGACCCTCGCCCCACCCAGTGGCTTGACGGCAAACACACCATTTTGGCCGAGTG  
TGTCAGGGCATAGGAATGGTGAATCGCGTGGGAATGGTAGAAACAACTCCAGGACCGCCCTGTGGACGACGTG  
AAGATCATTAAAGGCATACCCTTCTGGGTAGACTTGCTACCCTCTTGAGCAGCTCTTCTGAGATGGCCCCAGTGAA  
CCAGCTTCTAGATGACATAGAATGACATGTAATGCTAAATTTCAATTTGGCTTTGCAAGTCATGAAGCTTAGGAG  
GCCTGGCATCTTGGGTGAGTTAGAGATGGAAGTACATTTTAATAGGATGCTTCTTTCTCTTCCCCCAGTGCCTA  
GGTTGCCAGAGCATTTGCACAAATGCCCTGTTTATCAATAGGTGACTACTTACTACACATGAACCATAATGCTG  
CTTCTTGTGCATGTCTGCTCTGATATACGTGCAACAATGTAGCAGCCACTGTCAATTTCTCAGTGGTTTTGCCTAA  
CCAACTTCTTCCCTAAGGAGATTTATATTCTGGCCTACACAGCAGTCCTTGATGGCTGACAGCCACAGAATTCCA  
AACCAAGTAGTGTCTGTGACGCCCTCTTAACCTCTGTGCACGCCCTATTTCACTCTTTTACATTTGTTCTTCTAGGG  
AATGTATGCATCTCTATATATATTTTCCCTCTCAAAACCAGAACATCAACAGTGCTGTTTCTGACACTTCAGACA  
TCCCACGCAAAGCCACATTGAATTTTGGCAAATGAAAAACACATCCAACAATCAAGTTTCTAAGAAGGTGTCAA  
GTGGGGAATAATAATAATGTATAATAATCAAGAAATTAGTTTATTAAGGAAGCAGAAGCATTGACCATTTTTT  
CCCAGAGAAGAGGAGAAATCTGTAGTGAGCAAAGGACAGACCATGAATCCTCCTTGAGAAGTAGTACTCTCAGAA  
AGGAGAAGCGCCACTCAAGTTCTTTTAACCAAGACTTTAGAGAAATTAGGTCCAAGATTTTTATATGTTTCAGTT  
GTTTATGTATAAAAAATAACTTTCTGGATTTTGTGGGGAGGAGCAGGAGAGGAAGGAAGTTAATACCTATGTAATA  
CATAGAACTTCCACAATAAAATGCCATTGATGGTGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 8**

MAAIPDPSWQPPNVYLETSMGIIVLELYWKHAPKTCKNFAELARRGYNGTKFHRI IKDFMIQGGDPTGTGRGGA  
SIYGKQFEDELHPDLKFTGAGILAMANAGPDTNGSQFFVTLAPTQWLDGKHTIFGRVCQGIGMVNRVGMVETNSQ  
DRPVDDVKI IKAYPSG



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**FIGURE 9**

GTAACGGATGGTGCGCCAACGTGAGAGGAAACCCGTGCGCGGCTGCGCTTTCCTGTCCCCAAGCCGTTCTAGACG  
CGGATGAAGTGCAAAACAACTTCTCCATAGAGGAGTTGTTGCAAAGTTCCAGTTTATACCAAACAGTAATCAGA  
TTCCATTGGAAGCTAAAGATTTTGAGAGCCTTTTGACTATATGCAACTAACTTGATTTCAGCTTGGAACCTT  
TAAAAAAAACATTAAAGCAAAATGAAAAATGCTTTCTGAAAGCAGCTCCTTTTGAAAGGTGTGATGCTTGGAAG  
CCATTTTCTGTGCTTTGATCCACTAATGCTAAGGACACATTAGGATTGGTCATGGAAATAGAAATGCACCACCATG  
AGCATCATCACCTACAAGCTCCTAACAAAGAAGATATCTTGAAAATTTTCAGAGGATGAGCGCATGGAGCTCAGTA  
AGAGCTTTCGAGTATACTGTATTATCCTTGTAACCCAAAGATGTGAGTCTTTGGGCTGCAGTAAAGGAGACTT  
GGACCAAACACTGTGACAAAGCAGAGTTCTTCAGTTCTGAAAATGTTAAAGAGTTTGAGTCAATTAATATGGACA  
CAAATGACATGTGGTTAATGATGAGAAAAGCTTACAAATACGCCTTTGATAAGTATAGAGACCAATACAACCTGGT  
TCTTCCTTGACGCCCCACTACGTTTGCTATCATTGAAAACCTAAAGTATTTTTGTTAAAAAAGGATCCATCAC  
AGCCTTTCTATCTAGGCCACACTATAAAATCTGGAGACCTTGAATATGTGGGTATGGAAGGAGGAATTGTCTTAA  
GTGTAGAATCAATGAAAAGACTTAACAGCCTTCTCAATATCCCAGAAAAGTGCCTGAACAGGGAGGGATGATTT  
GGAAGATATCCGAAGATTAACAGCTAGCAGTTTGCCTGAAATATCCTCGAGTATTTGCAGAAAATGCAGAAGATG  
CTGATGGAAAAGATGTATTTAATACCAAATCTGTTGGGCTTTCTATTAAAGAGGCAATGACTTATACCCCCAACC  
AGGTAGTAGAAGGCTGTTGTTTCAGATATGGCTGTTACTTTTAATGGACTGACTCCAAATCAGATGCATGTGATGA  
TGTATGGGGTATACCGCCTTAGGGCATTGGGCATATTTTCAATGATGCATTGGTTTTCTTACCTCCAAATGGTT  
CTGACAATGACTGAGAAGTGGTAGAAAAGCGTGAATATGATCTTTGTATAGGACGTGTGTTGTCATTATTTGTAG  
TAGTAACTACATATCCAATACAGCTGTATGTTTTCTTTTTCTTTTCTAATTTGGTGGCACTGGTATAACCACCCAT  
TAAAGTCAGTAGTACATTTTTAAATGAGGGTGGTTTTTTCTTTAAACACATGAACATTGTAAATGTGTTGGAA  
AAAAGTGTTTTAAGAATAATAATTTTGCAATAAACTATTAATAAATATTATATGTGATAAATTCTAACC

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**FIGURE 10**

MHHHEHHHLQAPNKEDILKISEDERMELSKSFRVYCIILVKPKDVSLWAAVKETWTKHCDKAEFFSSENVKEFES  
INMDTNDMWLMMRKAYKYAFDKYRDQYNWFFLARP TTFAI IENLKYFLLKKDPSQPFYLGHTIKSGDLEYVGMEG  
GIVLSVESMKRLNSLLNIPEKCPEQGMIWKISEDKQLAVCLKYAGVFAENAEDADGKDVFNKSVGLSIKEAMT  
YHPNQVVEGCCSDMAVTFNGLTPNQMHVMMYGVYRLRAFGHIFNDALVFLPPNGSDND

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**FIGURE 11**

TCAGTGGGCGTCGCGCGAAGGCTAAGGGAGTGTGGCGGGCGGCTCCGGGAGCCAACATGCCTCGGTATGCGCAGC  
TGGTCATGGGCCCCGCGGGCAGCGGGAAGAGCACCTACTGTGCCACCATGGTCCAGCACTGTGAAGCCCTCAACC  
GGTCTGTCCAAGTTGTAAACCTGGATCCAGCAGCAGAACACTTCAACTACTCCGTGATGGCTGACATCCGGGAAC  
TGATCGAGGTGGATGATGTAATGGAGGATGATTCTCTGCGATTCCGTCCCAACGGAGGATTGGTATTTTGCATGG  
AGTACTTTGCCAATAATTTTACTGGCTGGAGAACGTCTTGCCCATGTAGAGGACGACTATATCCTTTTGTATT  
GTCCAGGTCAGATTGAGTTGTACACTCACCTGCCTGTGATGAAACAGCTGGTCCAGCAGCTCGAGCAGTGGGAGT  
TCCGAGTCTGTGGAGTTTTTCTTGTTGATTCTCAGTTCATGGTGGAGTCATTCAAGTTTATTTCTGGCATCTTGG  
CAGCCCTGAGTGCCATGATCTCTCTAGAAATTCCGCAAGTCAACATCATGACAAAAATGGATCTGCTGAGTAAAA  
AAGCAAAAAAGGAAATTGAGAAATTTTAGATCCAGACATGTATTCTTTATTAGAAGATTCTACAAGTGACTTAA  
GAAGCAAAAAATTCAAGAACTGACTAAAGCTATATGTGGACTGATTGATGACTACAGCATGGTTTCGATTTTAC  
CTTACGATCAGTCAGATGAAGAAAGCATGAACATTGCATTGCAGCATATTGATTTTGCCATTCAATATGGAGAAG  
ACCTAGAATTTAAAGAACCAAAGGAACGTGAAGATGAGTCTTCCTCTATGTTTGACGAATATTTCAAGAATGCC  
AGGATGAATGAAGAGTTTACTAAAAGTAACCATCTAAAGAGCTTGTGGCCAAACCAGCAGAACATTCTTCTCTTC  
AAAGGATGCAATAGTAGAAAGCTACTTATTTTAATGAAAAAAGTAAACTTCGTTCTTTATCAGCCTCATGCCT  
GAATCAAATTTTAAATTATTCTGAACTGCTGCTGTTTAAAGTGGAAATCTTTTAGTATTATAACAGCATCACTTT  
AGATTTTGTAAAGTCAAATTTGAAATGAATGCACATAGATTTATATATAAATTAGCACCTGAGCTAAGGTTAAGGC  
TGGTCTAACTTATTTTCACTTTTGTATTATTTTGGAGATGCAGGAATTACTGTAACAAAATATGTATGTCCGA  
AGGGAAAAAGCTGCAAGGATATATATAAGACCACTGCTTATCTGTATCTTCCATTTTCTATATTGAAAATGTA  
TATTATTTATATACTTAAAAAGTAAAAATAACTATGTTTTGAGATATGTATGTGTATATATAAAAAGAAACAAAG  
GTTTTTAATGATTCTTGGACCTAGATAACAAGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA  
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 12**

MPRYAQLVMGPAGSGKSTYCATMVQHCEALNRSVQVVNLDPAAEHFNYSVMADIRELIEVDDVMEDDSLRFGPNG  
GLVFCMEYFANNFDWLENCLGHVEDDYILFDCPGQIELYTHLPVMKQLVQQLQWEFRVCGVFLVDSQFMVESFK  
FISGILAALSAMISLEIPQVNIMTKMDLLSKKAKKEIEKFDPDMYSLLEDSTDLRSKKFKKLTKAICGLIDDY  
SMVRFLPYDQSDEESMNIALQHIDFAIQYGEDLEFKPKEREDESSMFDEYFQECQDE

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**FIGURE 13**

CCGGGACAGCTCGCGGCCCCGAGAGCTCTAGCCGTCGAGGAGCTGCCTGGGGACGTTTGCCTTGGGGCCCCAGC  
CTGGCCCGGGTCACCCTGGCATGAGGAGATGGGCCTGTTGCTCCTGGTCCCGTTGCTCCTGCTGCCCCGGCTCCTA  
CGGACTGCCCTTCTACAACGGCTTCTACTACTCCAACAGCGCCAACGACCAGAACCTAGGCAACGGTCATGGCAA  
AGACCTCCTTAATGGAGTGAAGCTGGTGGTGGAGACACCCGAGGAGACCCTGTTACCTACCAAGGGGCCAGTGT  
GATCCTGCCCTGCCGCTACCGCTACGAGCCGGCCCTGGTCTCCCCGCGCGCTGTGCGTGTCAAATGGTGGAGCT  
GTCGGAGAACGGGGCCCCAGAGAAGGACGTGCTGGTGGCCATCGGGCTGAGGCACCGCTCCTTTGGGGACTACCA  
AGGCCGCGTGCACCTGCGGCAGGACAAAGAGCATGACGTCTCGCTGGAGATCCAGGATCTGCGGCTGGAGGACTA  
TGGGCGTTACCGCTGTGAGGTCAATTGACGGGCTGGAGGATGAAAGCGGTCTGGTGGAGCTGGAGCTGCGGGGTGT  
GGTCTTTTCCTTACAGTCCCCCAACGGGCGCTACAGTTCAACTTCCACGAGGGCCAGCAGGTCTGTGCAGAGCA  
GGCTGCGGTGGTGGCCTCCTTTGAGCAGCTCTTCCGGGCCTGGGAGGAGGGCCTGGACTGGTGCAACGCGGGCTG  
GCTGCAGGATGCCACGGTGCAGTACCCCATCATGTTGCCCGGCAGCCCTGCGGTGGCCCGGGCCTGGCACCTGG  
CGTGCGAAGCTACGGCCCCCGCCACCGCGCCTGCACCGCTATGATGTATTCTGCTTCGCTACTGCCCTCAAGGG  
GCGGGTGTACTACCTGGAGCACCCCTGAGAAGCTGACGCTGACAGAGGCAAGGGAGGCCTGCCAGGAAGATGATCC  
CACGATCGCCAAGGTGGGACAGCTCTTTGCCGCCTGGAAGTTCCATGGCCTGGACCGCTGCGACGCTGGCTGGCT  
GGCAGATGGTAGCGTCCGCTACCCCTGTGGTTACCCGCATCCTAACTGTGGGCCCCCAGAGCCTGGGGTCCGAAG  
CTTTGGCTTCCCCGACCCGCAGAGCCGCTTGACGGTGTCTTACTGCTACCGCCAGCACTAGGACCTGGGGCCCTC  
CCCTGCCGCAATCCCTCACTGGCTGTGTATTTATTGAGTGGTTCGTTTTCCCTTGTGGGTGGAGCCATTTTAAC  
TGTTTTTATACTTCTCAATTTAAATTTTCTTTAAACATTTTTTTACTATTTTTGTAAAGCAAACAGAACCCAAT  
GCCTCCCTTTGCTCCTGGATGCCCCACTCCAGGAATCATGCTTGCTCCCCTGGGCCATTTGCGGTTTTGTGGGCT  
TCTGGAGGGTTCCCCGCCATCCAGGCTGGTCTCCCTCCCTTAAGGAGGTTGGTGCCAGAGTGGGCGGTGGCCTG  
TCTAGAATGCCGCCGGGAGTCCGGGCATGGTGGGCACAGTTCTCCCTGCCCCCTCAGCCTGGGGGAAGAAGAGGGC  
CTCGGGGGCCTCCGGAGCTGGGCTTTGGGCCTCTCCTGCCCACCTCTACTTCTCTGTGAAGCCGCTGACTGTAAC  
CCAGTTCTAGGCTTCCAGGCGAAAGCTGAGGGAAGGAAGAACTCCCCTCCCCGTTCCCTTCCCTCTCGGTTT  
CAAAGAATCTGTTTTGTTGTCAATTTGTTTCTCCTGTTCCCTGTGTGGGAGGGGCCCTCAGGTGTGTGTACTTT  
GGACAATAAATGGTGTATGACTGCCTTCCGCCAAAAA

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**FIGURE 14**

MGLLLLVPLLLLPGSYGLPFYNGFYYSNSANDQNLGNGHGKDLLNGVKLVVETPEETLFTYQGASVILPCRYRYE  
PALVSPRRVRVKWWKLSENGAPEKDVLVAIGLRHRSFGDYQGRVHLRQDKEHDVSLEIQDLRLLEDYGRYRCEVID  
GLEDESGLVELELRGVVFPYQSPNGRYQFNFHEGQQVCAEQAAVVASFQLFRAWEEGLDWCNAGWLQDATVQYP  
IMLPRQPCGGPGLAPGVRSYGPRHRLHRYDVFCFATALKGRVYYLEHPEKLTLTAREACQEDDATIAKVGQLF  
AAWKFHGLDRCDAGWLADGSVRYPVVHPHPNCGPPEPGVRSFGFPDPQSRLYGVYCYRQH

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**FIGURE 15A**

GGCGAGCTAAGCCGGAGGATGTGCAGCTGCGGGCGGCGGCGCCGGCTACGAAGAGGACGGGGACAGGCGCCGTGCG  
AACCGAGCCCAGCCAGCCGGAGGACGCGGGCAGGGCGGGACGGGAGCCCGGACTCGTCTGCCGCCGCCGTGCTCG  
CCGTCTGTCGCCGCCCCGCGTCCCCGCGCGCGAGCGGGAGGAGCCGCCGCCACCTCGCGCCCCGAGCCGCCGCTAGC  
GCGCGCCCGGGCATGGTCCCCTCTTAAAGGCGCAGGCCGCGGGCGGGGGCGGGCGTGCGGAACAAAGCGCCGGC  
GCGGGGCGCTGCGGGCGGCTCGGGGGCCGCGATGGGCGCGGGCGGGGCCGCGGCGGGCGGCGCTGCCCGGGCCGG  
GCCTCGCGCGCTAGGGCGGGCTGGCCTCCGCGGGCGGGGGCAGCGGGCTGAGGGCGCGCGGGGGCCTGCGGCGGC  
GGCGGGCGGGCGGGCGGGCGGGCCGGCGGGCGGAGCGGCGCGGGCATGGCGCGCGCGGGCCGGCGCGCCTGGCTCA  
GCGTGCTGCTCGGGCTCGTCTGGGCTTCGTGCTGGCTCGCGGCTCGTCTGCCCGGGCTTCCGAGCTGAAGC  
GAGCGGGCCACGGCGCCGCGCCAGCCCCGAGGGCTGCCGGTCCGGGCAGGCGGCGGGCTTCCAGGCCGGCGGGG  
CGCGCGGCGATGCGCGCGGGGCGCAGCTCTGGCCGCCCGGCTCGGACCCAGATGGCGGGCCGCGCGACAGGAAGT  
TTCTCTTCGTGGGAGTCATGACCGCCAGAAATACCTGCAGACTCGGGCCGTGGCCGCTACAGAACATGGTCCA  
AGACAATTCCTGGGAAAGTTCACTTCTTCAAGTGAGGGTTCTGACACATCTGTACCAATTCAGTAGTGCCAC  
TACGGGGTGTGGAGCACTCTACCCGCCCCAGAAAGTCTTTCATGATGCTCAAGTACATGCACGACCACTACT  
TGGACAAGTATGAATGGTTTATGAGAGCAGATGATGACGTGTACATCAAAGGAGACCGTCTGGAGAAGTTCCTGA  
GGAGTTTGAACAGCAGCGAGCCCTCTTCTTGGGCAGACAGGCCTGGGCACCACGGAAGAAATGGGAAAAGTGG  
CCCTGGAGCCTGGTGAGAAGTCTGTCATGGGGGGGCTGGCGTGATCATGAGCCGGGAGGTGCTTCGGAGAATGG  
TGCCGCACATTGGCAAGTGTCTCCGGGAGATGTACACCACCCATGAGGACGTGGAGGTGGGAAGGTGTGTCCGGA  
GGTTTGAGGGGTGCAGTGTGTCTGGTCTTATGAGATGCAGCAGCTTTTTTATGAGAATTACGAGCAGAACAAAA  
AGGGGTACATTAGAGATCTCCATAACAGTAAATTCACCAAGCTATCACATTACACCCCAACAAAAACCCACCT  
ACCAGTACAGGCTCCACAGCTACATGCTGAGCCGAAGATATCCGAGCTCCGCCATCGCACAAATACAGCTGCACC  
GCGAAATTGCTCTGATGAGCAAAATACAGCAACACAGAAATTCATAAGAGGACCTCCAGCTGGGAATCCCTCCCT  
CCTTCATGAGTTTTCAGCCCCGCCAGCGAGAGGAGATTCTGGAATGGGAGTTTCTGACTGGAAAATACTTGTATT  
CGGCAGTTGACGGCCAGCCCCCTCGAAGAGGAATGGACTCCGCCAGAGGGAAGCCTTGGACGACATTGTCTATGC  
AGGTCTAGGAGATGATCAATGCCAACGCCAAGACCAGAGGGCGCATCATTGACTTCAAAGAGATCCAGTACGGCT  
ACCGCCGGGTGAACCCCATGTATGGGGCTGAGTACATCTGGACCTGCTGCTTCTGTACAAAAAGCACAAAGGGA  
AGAAAATGACGGTCCCTGTGAGGAGGCACGCGTATTTACAGCAGACTTTCAGCAAAATCCAGTTTGTGGAGCATG  
AGGAGCTGGATGCACAAGAGTTGGCCAAGAGAATCAATCAGGAATCTGGATCCTTGTCTTTCTCTCAAAGTCCC  
TGAAGAAGCTCGTCCCCTTTTCACTCCCTGGGTGCAAGAGTGAGCACAAAGAACCCAAAGATAAAAAAGATAAACA  
TACTGATTCCCTTTGTCTGGGCGTTTCGACATGTTTGTGAGATTTATGGGAAAGTTCGAGAAGACGTGTCTTATCC  
CCAATCAGAACGTCAAGCTCGTGGTTCTGCTTTTCAATTCTGACTCCAACCCTGACAAGGCCAAACAAGTTGAAC  
TGATGACAGATTACCGCATTAAGTACCCTAAAGCCGACATGCAGATTTTGCCTGTGTCTGGAGAGTTTTCAAGAG  
CCCTGGCCCTGGAAGTAGGATCCTCCAGTTTAAACAATGAATCTTTGCTCTTCTTCTGCGACGTGACCTCGTCT  
TTACTACAGAATTCCTTCAGCGATGTGAGCAAAATACAGTTCTGGGCCAACAAATATATTTTCCAATCATCTTCA  
GCCAGTATGACCCAAAGATTGTTTATAGTGGGAAAGTTCACAGTGACAACCATTTTGCCTTTACTCAGAAAAGT  
GCTTCTGGAGAACTATGGGTTTGGCATCACGTGTATTTATAAGGGAGATCTTGTCCGAGTGGGTGGCTTTGATG  
TTTCCATCCAAGGCTGGGGGCTGGAGGATGTGGACCTTTCAACAAGGTTGTCCAGGCAGGTTTGAAGACGTTTA  
GGAGCCAGGAAGTAGGAGTAGTCCACGTCCACCATCCTGTCTTTTGTGATCCCAATCTTGACCCCAACAGTACA  
AAATGTGCTTGGGGTCCAAAGCATCGACCTATGGGTCCACACAGCAGCTGGCTGAGATGTGGCTGGAAAAAATG  
ATCCAAGTTACAGTAAAAGCAGCAATAATAATGGCTCAGTGAGGACAGCCTTAATGTCCAGCTTTGCTGGAAAAGA  
CGTTTTTAATTATCTAATTTATTTTCAAAAAATTTTGTATGATCAGTTTTTGAAGTCCGTATACAAGGATATA  
TTTTACAAGTGGTTTTCTTACATAGGACTCCTTTAAGATTGAGCTTTCTGAACAAGAAGGTGATCAGTGTGGCC  
TTTGAACACATCTTCTTGTGTAACATTATGTAGCAGACCTGCTTAACTTTGACTTGAAATGTACCTGATGAACAA  
AACTTTTTTAAAAAATGTTTTCTTTTGTAGACCCTTTGCTCCAGTCCATGAGCAGAAAACGTGAACATTCTTGCA  
AAGTATTATTGTAACAAAACACTGTAACCTCTGGTAAATGTTCTGTTGTGATTGTTAACATTCCACAGATTCTACC  
TTTTGTGTTTTGTTTTTTTTTTTTTACAATTGTTTTAAAGCCATTTCATGTTCCAGTTGTAAGATAAGGAAATGT  
GATAATAGCTGTTTCATCATTGTCTTCAGGAGAGCTTTCAGAGTTGATCATTTCCCTCATGGTACTCTGCTCA  
GCATGGCCACGTAGGTTTTTTGTTTGTGTTTTGTTTGTCTTTTTTTGAGACGGAGTCTCACTCTGTTACCCAGGC  
TGGAATGCAGTGGCGCAATCTTGGCTCACTTTAACTCCACTCCCTGGTTCAAGCAATTCCTGCTTTGCTT

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**FIGURE 15B**

CCCGAGTAGCTGGGATTACAGGCACACACCACCACGCCAGCTAGTTTTTTTGTATTTTTAGTAGAGACGGGGTT  
TCACCATGCAAGCCCAGCTGGCCACGTAGGTTTTAAAGCAAGGGGCGTGAAGAAGGCACAGTGAGGTATGTGGCT  
GTTCTCGTGGTAGTTCAATTCGGCCTAAATAGACCTGGCATTAAATTTCAAGAAGGATTGGCATTCTCTCTT  
GACCCCTTCTCTTTAAAGGGTAAAATATTAATGTTTAGAATGACAAAGATGAATTATTACAATAAATCTGATGTAC  
ACAGACTGAAACACACACACATACACCCTAATCAAACGTTGGGGAAAAATGTATTTGGTTTTGTTTCCTTTTCATC  
CTGTCTGTGTTATGTGGGTGGAGATGGTTTTTCATTCTTTCATTACTGTTTTGTTTTATCCTTTGTATCTGAAATA  
CCTTTAATTTATTTAATATCTGTTGTTTCAGAGCTCTGCCATTTCTTGAGTACCTGTTAGTTAGTATTATTTATGT  
GTATCGGGAGTGTGTTTAGTCTGTTTTATTTGCAGTAAACCGATCTCCAAAGATTTCTTTTGAAACGCTTTTT  
CCCCTCCTTAATTTTTATATTCTTACTGTTTTACTAAATATTAAGTGTTCTTTGACAATTTTGGTGCTCATGTG  
TTTTGGGGACAAAAGTGAAATGAATCTGTCATTATACCAGAAAGTTAAATTCAGATCAAATGTGCCTTAATAA  
ATTTGTTTTTCATTTAGATTTCAAACAGTGATAGACTTGCCATTTTAATACACGTCATTGGAGGGCTGCGTATTTG  
TAAATAGCCTGATGCTCATTGGAATAAACCAGTGAACAATATTTTCTATTGTACTTTTCAGAACCATTTT  
GTCTCATTATTCTGTTTTAGCTGAAGAATTGTATTACATTTGGAGAGTAAAAAACTTAAACACG



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**FIGURE 16**

MAARGRRAWLSVLLGLVLGFVLASRLVLPRASELKRAGERRRASPEGCRSGQAAASQAGGARGDARGAQLWPPGS  
DPDGGPRDRNFLFVGVMTAQKYLQTRAVAAYRTWSKTIPGKVQFFSSEGS DTSVP IPVVPLRGVDDSYPPQKKSF  
MMLKYMHDHYLDKYEFMRADDDVYIKGDRLNENFLRSLNSSEPLFLGQTGLGTTEEMGKLALPGENFCMGGPGV  
IMSREVLRRMVPHIGKCLREMYTTTHEDVEVGRCVRRFAGVQCVWSYEMQQLFYENYEQNKKGYIRDLHNSKIHQA  
ITLHPNKNPPYQYRLHSYMLSRKISELRHRTIQLHREIVLMSKYSNTEIHKEDLQLGIPPSFMRFPQRQREEILE  
WEFLTGKYLYSAVDGQPPRRGMDSAQREALDDIVMQVMEMINANAKTRGRIIDFKEIQYGYRRVNP MYGAEYILD  
LLLLYKKHKGKKMTVPVRRHAYLQQTFSKIQFVEHEELDAQELAKRINQESGSLSF LSNLKKLVFPQLPGSKSE  
HKEPKDKKINILIPLSGRFDMFVRFMGNFEKTCLIPNQNVKLVLVLFNSDSNPDKAKQVELMTDYRIKYPKADMQ  
ILPVSGEFSRALALEVGSSQFNNESSLFFCDVDLVFTTEFLQRCRANTVLGQQIYFPIIFSQYDPKIVYSGKVPS  
DNHFAFTQKTGFWRNYGFGITCIYKGD LVRVGGFDVSIQGWGLEDVDLFNKVVQAGLKTFRSQEVGVVHVHHPVF  
CDPNLDPKQYKMCLGSKASTYGSTQQLAEMWLEKNDPSYSKSSNNNGSVRTA

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**FIGURE 17**

GCTGGAGCCGGGCCGGGGCGATGTGAGCGCGGGCCGCGGGGGCTGCCTGGCCGGTGCTGTTGGGGCTGCTGC  
TGGCGCTGTTAGTGCCGGGCGGTGGTGCCGCCAAGACCGGTGCGGAGCTCGTGACCTGCGGGTCGGTGCTGAAGC  
TGCTCAATACGCACCACCGCGTGCGGCTGCACTCGCACGACATCAAATACGGATCCGGCAGCGGCCAGCAATCGG  
TGACCGGCGTAGAGGCGTCGGACGACGCGAATAGCTACTGGCGGATCCGCGGGCGGCTCGGAGGGCGGGTGCCCGT  
GCGGGTCCCCGCTGCGCTGCGGGCAGGCGGTGAGGCTCACGCATGTGCTTACGGGCAAGAACCTGCACACGCACC  
ACTTCCCGTCGCCGCTGTCCAACAACCAGGAGGTGAGTGCCTTTGGGGAAGACGGCGAGGGCGACGACCTGGACC  
TATGGACAGTGCCTGCTCTGGACAGCACTGGGAGCGTGAGGCTGCTGTGCGCTTACAGCATGTGGGCACCTCTG  
TGTTCTGTGAGTCACGGGTGAGCAGTATGGAAGCCCCATCCGTGGGCAGCATGAGGTCCACGGCATGCCAGTG  
CCAACACGCACAATACGTGGAAGGCCATGGAAGGCATCTTCATCAAGCCTAGTGTGGAGCCCTCTGCAGGTCACG  
ATGAACCTCTGAGTGTGTGGATGGATGGGTGGATGGAGGGTGGCAGGTGGGGCGTCTGCAGGGCCACTCTTGGCAG  
AGACTTTGGGTTTGTAGGGGTCCTCAAGTGCCTTTGTGATTAAAGAATGTTGGTCTATGA

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**FIGURE 18**

MWSAGRGGAAWPVLLGLLLALLVPGGGAAGTGAELVTCGSVLKLLNTHHRVRLHSHDIKYGSGSGQQSVTGVEAS  
DDANSYWRIRGGSEGGPCGSPVRCGQAVRLTHVLTGKNLHTHHFPSPLSNNQEVSAFGEDGEGDDLDLWTVRCS  
GQHWEREAAVRLQHVGTSVFLSVTGEQYGSPIRGQHEVHGMP SANTHNTWKAMEGIFIKPSVEPSAGHDEL

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**FIGURE 19**

TCTCAGGGCTTCATACAGGAAATCTATTGCTGTGTCAAGTTCCAGAGAAAAGCTTCTGTTCTGTTCCAAGTTACTAA  
CCAGGCTAAACCACATAGACGTGAAGGAAGGGGCTAGAAGGAAGGGAGTGCCCCACTGTTGATGGGGTAAGAGGA  
TCCTGTACTGAGAAGTTGACCAGAGAGGGTCTCACCATGCGCACAGTTCCCTTCTGTACCTGTGTGGAGGAAAAGT  
ACTGAGTGAAGGGCAGAAAAAGAGAAAAACAGAAATGCTCTGCCCTTGGAGAACTGCTAACCTAGGGCTACTGTG  
ATTTTGACTATCTTCTTAGTGGCCGAAGCGGAGGGTGCTGCTCAACCAAACAACCTCATTAAATGCTGCAAACCTAGC  
AAGGAGAATCATGCTTTAGCTTCAAGCAGTTTATGTATGGATGAAAAACAGATTACACAGAACTACTCGAAAAGTA  
CTCGCAGAAGTTAACTTTCATGGCCTGTAAAGATGGCTACAAATGCTGTGCTTTGTTGCCCTCCTATCGCATT  
AGAAATTTGATCATAATAACATGGGAAATAATCCTGAGAGGCCAGCCTTCCTGCACAAAAGCCTACAGGAAAGAA  
ACAAATGAGACCAAGGAAACCAACTGTACTGATGAGAGAATAACCTGGGTCTCCAGACCTGATCAGAATTCGGAC  
CTTCAGATTCGTCCAGTGGCCATCACTCATGACGGGTATTACAGATGCATAATGGTAACACCTGATGGGAATTTT  
CATCGTGGATATCACCTCCAAGTGTTAGTTACACCTGAACTGACCCTGTTTCAAAACAGGAATAGAACTGCAGTA  
TGCAAGGCAGTTGCAGGGAAGCCAGCTGCGCAGATCTCCTGGATCCCAGAGGGCGATTGTGCCACTAAGCAAGAA  
TACTGGAGCAATGGCACAGTGAAGTGTAAAGAGTACATGCCACTGGGAGGTCCACAATGTGTCTACCGTGACCTGC  
CACGTCTCCCATTTGACTGGCAACAAGAGTCTGTACATAGAGCTACTTCCTGTTCCAGGTGCCAAAAAATCAGCA  
AAATTATATATTCCATATATCATCCTTACTATTATTATTTTGACCATCGTGGGATTCATTTGGTTGTTGAAAGTC  
AATGGCTGCAGAAAATATAAATTGAATAAAACAGAATCTACTCCAGTTGTTGAGGAGGATGAAATGCAGCCCTAT  
GCCAGCTACACAGAGAAGAACAATCCTCTCTATGATACTACAAACAAGGTGAAGGCATCTCAGGCATTACAAAGT  
GAAGTTGACACAGACCTCCATACTTTATAAGTTGTTGGACTCTAGTACCAAGAAACAACAACAAACGAGATACAT  
TATAATTACTGTCTGATTTTCTTACAGTTCTAGAAATGAAGACTTATATTGAAATTAGGTTTCCAAAGGTTCTTAG  
AAGACATTTTAATGGATTCTCATTACATACCCTTGTATAATTGGAATTTTGGATTCTTAGCTGCTACCAGCTAGTT  
CTCTGAAGAACTGATGTTATTACAAAGAAAAATACATGCCCATGACCAAATATTCAAATTTGTGCAGGACAGTAAAT  
AATGAAAACCAATTTTCTCAAGAAATAACTGAAGAAGGAGCAAGTGTGAACAGTTTCTTGTGTATCCTTTTCAGA  
ATATTTTAATGTACATATGACATGTGTATATGCCTATGGTATATGTGTCAATTTATGTGTCCCCTTACATATACA  
TGCACATATCTTTGTCAAGGCACCAGTGGGAACAATACACTGCATTACTGTTCTATACATATGAAAACCTAATAA  
TATAAGTCTTAGAGATCATTTTATATCATGACAAGTAGAGCTACCTCATTCTTTTAAATGGTTATATAAAATTCC  
ATTGTATAGTTATATCATTATTTAATTAAAAACAACCTAATGATGGATATTTAGATTCTTTTAAAGTTTTGTTTA  
TTTCTTTTAAAGTTTTGTTTGTGGTATAACAATACCACATAGAATGTTTCTTGTTCATATATCTCTTTGTTTTTG  
AGTATATCTGTAGGATAACTTTCTTGAGTGAATTGTCAGGTCAAAGGTTTGTGCATTTTACTATTGATATATA  
TGTTAAATTGTGTCAAATATATATGTCAAATTCCTTCCAACATTGTTTAAATGTGCCTTTCCCTAAATTTCTATT  
TTAATAACTGTACTATTCTCTGCTTCTACAGTTGCCACTTTCTCTTTTAAATCAACCAGATTAAATATGATGTGAG  
ATTATAATAAGAATTATACTATTTAATAAAAAATGGATTTATA

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**FIGURE 20**

MLCPWRTANLGLLLILTIFLVAEAEAGAAQPNNSLMLQTSKENHALASSSLCMDEKQITQNYSKVLAEVNTSWPVK  
MATNAVLCCPPIALRNLIITWEIILRGQP SCKAYRKETNETKETNCTDERITWVSRPDQNSDLQIRPVAITHD  
GYYRCIMVTPDGNFHRGYHLQVLVTPELTLFQNRNRRTAVCKAVAGKPAAQISWIPEGDCATKQEYWSNGT VTVKS  
TCHWEVHNVSTVTCHVSHLTGNKSLYIELLPVPGAKKSAKLYIPYIILTIIILTIVGFIWLLKVNGCRKYKLNKT  
ESTPVVEEDEMOPYASYTEKNNPLYDTTNKVKASQALQSEVDTDLHTL

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**FIGURE 21**

AAGGCTGTGGACCCCAGAGAAGGTGGCAGGTGGCCCCCTAGGAGAGCTCTGGGCACATTGCAATCTTCCCAAAC  
TCCAATAATAAAAATTGGAAGACTTTGGCAGAGAGTGTGTGTGTGTGTATGGTTGTTGGGCGTAGGACAGGTT  
TCGGGGATGCGCGGTACGCGGTACCACCCCTCGGAGGGCCCCACCCCCAGACGCCAGGCCGCTCCCCACTCCC  
CCTCAAGCAGCCCCAGCCGGGGACTTTCCGTGCGGGGAAGGGGCGGGGACCCTGAGCGAAAGGTGCGGAGGCGG  
CCTGCCGGGGTGGTTCCGCTTCCCGTTGCCGCTCGGGCGCTGTACCCAGAGCTCGAAGAGGAGCAGCGCGGCCG  
CGCGGACCCGGCAAGGCTGGGCGGACTCGGGGCTCCCAGGGACGCCATGCGGGGAGGCAGGGGCGCCCTTTC  
TGGCTGTGGCCGCTGCCAAGCTGGCGCTGCTGCCCTCTGTTGTGGGTGCTTTCCAGCGGACGCGTCCCCAGGGC  
AGCGCCGGGCCACTGCAGTGCTACGGAGTTGGACCCTTGGGCGACTTGAAGTGTCTGTTGGGAGCCTCTTGGGGAC  
CTGGGAGCCCCCTCCGAGTTACACCTCCAGAGCCAAAAGTACCGTTCCAACAAAACCCAGACTGTGGCAGTGGCA  
GCCGGACGGAGCTGGGTGGCCATTCTCGGGAACAGCTCACCATGTCTGACAACTCCTTGTCTGGGGCACTAAG  
GCAGGCCAGCCTCTCTGGCCCCCGTCTTCGTGAACCTAGAAAACCCAAATGAAGCCAAACGCCCCCGGCTGGGC  
CCTGACGTGGACTTTTCCGAGGATGACCCCTGGAGGCCACTGTCCATTGGGCCCCACCTACATGGCCATCTCAT  
AAAGTTCTGATCTGCCAGTTCCACTACCGAAGATGTCAGGAGGCGGCCTGGACCCTGCTGGAACCGCAGCTGAAG  
ACCATACCCCTGACCCCTGTTGAGATCCAAGATTTGGAGCTAGCCACTGGCTACAAAGTGTATGGCCGCTGCCGG  
ATGGAGAAAGAAGAGGATTTGTGGGGCGAGTGGAGCCCCATTTTGTCTTCCAGACACCGCCTTCTGCTCCAAAA  
GATGTGTGGGTATCAGGGAACCTCTGTGGGACGCC TGGAGGAGAGGAACCTTTGCTTCTATGGAAGGCCCCAGGG  
CCCTGTGTGCAGGTGAGCTACAAAGTCTGGTTCTGGGTTGGAGGTCTGTGAGCTGAGTCCAGAAGGAATTACCTGC  
TGCTGCTCCCTAATTCCAGTGGGGCGGAGTGGGCCAGGGTGTCCGCTGTCAACGCCACAAGCTGGGAGCCTCTC  
ACCAACCTCTCTTTGGTCTGCTTGGATTACGCTCTGCCCCCCGTAGCGTGGCAGTCAGCAGCATCGCTGGGAGC  
ACGGAGCTACTGGTGACCTGGCAACCGGGGCTGGGGAACCACTGGAGCATGTAGTGGACTGGGCTCGAGATGGG  
GACCCCTGGAGAACTCAACTGGGTCCGGCTTCCCCCTGGGAACCTCAGTGCTCTGTTACCAGGGAATTTCACT  
GTGGGGTCCCCTATCGAATCACTGTGACCGCAGTCTCTGCTTCAGGCTTGGCCTCTGCATCCTCCGTCTGGGGG  
TTCAGGGAGGAATTAGCACCCCTAGTGGGGCAACGCTTTGGCGACTCCAAGATGCCCCCTCCAGGGACCCCCGCC  
ATAGCGTGGGGAGAGGTCCCAAGGCACAGCTTCGAGGCCACCTCACCCTACACCTTGTGTGCACAGAGTGGGA  
ACCAGCCCCCTCCGTCTGCATGAATGTGAGTGGCAACACACAGAGTGTACCCCTGCCTGACCTTCCITTGGGGTCCC  
TGTGAGCTGTGGGTGACAGCATCTACCATCGCTGGACAGGGCCCTCCTGGTCCCATCCTCCGGCTTCATCTACCA  
GATAACACCCTGAGGTGGAAGTTCTGCCGGGCATCCTATTCTTGTGGGGCTTGTTTCTGTTGGGGTGTGGCCTG  
AGCCTGGCCACCTCTGGAAGGTGCTACCACCTAAGGCACAAAGTGTGCCCCGCTGGGTCTGGGAGAAAGTTTCT  
GATCTGCCAACAGCAGTTTACGGCCAGCCCCACATGGAGCAAGTACCTGAGGCCAGCCCCCTTGGGGACTTGCCC  
ATCCTGGAAGTGGAGGAGATGGAGCCCCCGCGGTATGGAGTCTCCAGCCCGCCAGGCCACCGCCCCGCTT  
GACTCTGGGTATGAGAAGCACTTCTGCCCACACCTGAGGAGCTGGGCCTTCTGGGGCCCCCAGGCCACAGGTT  
CTGGCCTGGAACACACGCTCTGGCTGGGGGCTGCCAGCCAGGCTAGAGGGATGCTCATGCAGGTTGCACCCCAGTC  
CTGGATTAGCCCTCTTGATGGATGAAGACACTGAGGACTCAGAGAGGCTGAGTCACTTACCTGAGGACACCCAGC  
CAGGCAGAGCTGGGATTGAAGGACCCCTATAGAGAAGGGCTTGCCCCCATGGGGAAGACACGGATGGAAGGTGG  
AGCAAAGGAAAATACATGAAATTGAGAGTGGCAGCTGCCTGCCAAAATCTGTTCCGCTGTAACAGAACTGAATTT  
GGACCCCAGCACAGTGGCTCAGCCTGTAATCCCAGCACTTTGGCAGGCCAAGGTGGAAGGATCACTTAGAGCTA  
GGAGTTTGAGACCAGCCTGGGCAATATAGCAAGACCCCTCACTACAAAATAAAACATCAAAAACAAAAACAATT  
AGCTGGGCATGATGGCACACACCTGTAGTCCGAGCCTTGGGAGGCTGAGGTGGGAGGATCGGTTGAGCCCAGG  
AGTTGGAAGCTGCAGGGACCTCTGATTGCACCACTGCACTCCAGGCTGGGTAACAGAATGAGACCTTATCTCAA  
AATAAACAACTAATAAAAAGCAAAAAAAAAAAAAAAAAAGAAAAGAAAAAAGCACTGCATTTGGGCACCATCTCAGC  
TCCCTTGATCCAGGTGCAGCATGGACTGAGTTCTTGACAACAGAATGTGGTCAGAAGTGACATATGCCAACACG  
GGGTCTGGGTGGGGGCTCCCCACATCCTTTTCTTGCTATGAGCTGGAACATAACACATGCCTATGATCCAGCT  
TTGGTCATACCCAAGGGGAAGGTGGAGCAAGAAATGAAAAGGAACCTGAATCCCTGAATGACTGCATGGATAGAA  
CCACTAAGAAAAATAAACTTTTATATTTTATA

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**FIGURE 22**

MRGGRGAPFWLWPLPKLALLPLLWVLFQRTRPQGSAGPLQCYGVGPLGDLNCSWEPLGDLGAPSELHLQSQKYRS  
NKTQTVAVAAGRSWVAIPREQLTMSDKLLVWGTKAGQPLWPPVFVNLETQMKPNAPRLGPDVDFSEDDPLEATVH  
WAPPTWPSHKVLICQFHYRRCQEAAWTLLEPELKT IPLTPVEIQDLELATGYKVYGRCRMEEEDLWGEWSPILS  
FQTPPSAPKDVWVSGNLCGTPGGEEPLLLWKAPGPCVQVSYKVWFVVGRELSPEGITCCCSLIPSGAEWARVSA  
VNATSWEPLTNLSLVCLDSASAPRSVAVSSIAGSTELLVTWQPGPGEPLEHVVDWARDGDPLEKLNWVRLPPGNL  
SALLPGNFTVGVPIRITVTAVSASGLASASSVWGFREELAPLVGPTLWRLQDAPPGTPAIAWGEVPRHQLRGHLT  
HYTLCAQSGTSPSVCNMVSGNTQSVTLPLDLPWGPCELWVTASTIAGQGPPGPILRLHLPDNTLRWKVLPGLFLW  
GLFLLGCGLSLATSGRCYHLRHKVLPRWVWEKVPDPANSSSGQPHMEQVPEAQPLGDLPILEVEEMEPVPMESS  
QPAQATAPLD SGYEKHF LPTPEELG LLGPPRPQVLA

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**FIGURE 23**

GGCACGAGGGCTGCCTGGCGCTGCGGGCGGCGGGCCATGGTGGTTTGGATTGAGCCGGGCGCGCGGGCGCGCG  
AGTCGGAGGGGGTGGCAGTGAGCGGCGGCAGAGGCTACGGGGCTCGGTTTGGCTGACTGGGGAGTCGGCAGGCGG  
CAGGAACCAATGCGAGGCCAGCGGAGCCTGCTGCTGGGCCCCGGCCCCCTCTGCCTCCGCCTCCTTCTGCTGCTGG  
GTTACAGGCGCGCTGTCCACCTCTACTCCGGGGTCTAGTACAGCGCTGGCGCTACGGCAAGGTCTGCCTGCGCT  
CCCTGCTCTACAACCTCCTTTGGGGGCAGTGACACCGCTGTTGATGCTGCCTTTGAGCCTGTCTACTGGCTGGTAG  
ACAACGTGATCCGCTGGTTTGGAGTGGGCAGGAATGATATCGCCACCGTCTCCATCTGTAAGAAGTGCATTTACC  
CCAAGCCAGCCCGAACACACCACTGCAGCATCTGCAACAGGTGTGTGCTGAAGATGGATCACCCTGCCCCCTGGC  
TAAACAATTGTGTGGGCCACTATAACCATCGGTACTTCTTCTCTTTCTGCTTTTTTCATGACTCTGGGCTGTGTCT  
ACTGCAGCTATGGAAGTTGGGACCTTTTCCGGGAGGCTTATGCTGCCATTGAGACTTATCACCAGACCCACCAC  
CCACCTTCTCCTTTTCGAGAAAGGATGACTCACAAGAGTCTTGTCTACCTCTGGTTCCTGTGCAGTTCTGTGGCAC  
TTGCCCTGGGTGCCCTAACTGTATGGCATGCTGTTCTCATCAGTCGAGGTGAGACTAGCATCGAAAGGCACATCA  
ACAAGAAGGAGAGACGTCGGCTACAGGCCAAGGGCAGAGTATTTAGGAATCCTTACAACCTACGGCTGCTTGGACA  
ACTGGAAGGTATTCTCGGGTGTGGATACAGGAAGGCACTGGCTTACTCGGGTGCTCTTACCTTCTAGTCACTTGC  
CCCATGGGAATGGAATGAGCTGGGAGCCCCCTCCCTGGGTGACTGCTCACTCAGCCTCTGTGATGGCAGTGTAG  
CTGGACTGTGTGTCAGCCACGACTCGAGCACTCATTCTGCTCCCTATGTTATTTCAAGGGCCTCCAAGGGCAGCTTT  
TCTCAGAATCCTTGATCAAAAAGAGCCAGTGGGCC TGCCTTAGGGTACCATGCAGGACAATTCAAGGACCAGCCT  
TTTTACCACTGCAGAAGAAAGACACAATGTGGAGAAATCTTAGGACTGACATCCCTTTACTCAGGCAAACAGAAG  
TTCCAACCCAGACTAGGGGTCAGGCAGCTAGCTACCTACCTTGCCCAGTGCTGACCCGGACCTCCTCCAGGATA  
CAGCACTGGAGTTGGCCACCACCTCTTCTACTTGTGTCTGAAAAAACACCTGACTAGTACAGCTGAGATCTTGG  
CTTCTCAACAGGGCAAAGATAACCAGGCCTGCTGCTGAGGTCACTGCCACTTCTCACATGCTGCTTAAGGGAGCAC  
AAATAAAGGTATTTCGATTTTTTAAAGATAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 24**

MRGQRSLLLGPRLCLRLLLLLLGYRRRCPPLLRGLVQRWRYGKVCLRSLLYNSFGGSDTAVDAAFEPPVYWLVDNV  
IRWFGVGRNDIATVSICKKCIYPKPARTHHCSICNRCVLKMDHHCPLNNCVGHYNHRYFFSFCFFMTLGCVYCS  
YGSWDLFREAYAAIETYHQTPPPTFSFRERMTHKSLVYLWFLCSSVALALGALTVWHAVLISRGETSIERHINKK  
ERRRLQAKGRVFRNPYNYGCLDNWKVFLGVDTGRHWLTRVLLPSSHLPHGNGMSWEPPPWVTAHSASVMAV

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**FIGURE 25**

ACGAGGGGAGCTCCGGCTGCGTCTTCCCGCAGCGCTACCCGCCATGCGCCTGCCGCGCCGGGCCGCGCTGGGGCT  
CCTGCCGCTTCTGCTGCTGCTGCCGCCCGCGCCGGAGGCCGCCAAGAAGCCGACGCCCTGCCACCGGTGCCGGGG  
GCTGGTGGACAAGTTTAACCAGGGGATGGTGGACACCGCAAAGAAGAACTTTGGCGGCGGGAACACGGCTTGGA  
GGAAAAGACGCTGTCCAAGTACGAGTCCAGCGAGATTGCGCTGCTGGAGATCCTGGAGGGGCTGTGCGAGAGCAG  
CGACTTCGAATGCAATCAGATGCTAGAGGCGCAGGAGGAGCACCTGGAGGCCTGGTGGCTGCAGCTGAAGAGCGA  
ATATCCTGACTTATTCGAGTGGTTTTGTGTGAAGACACTGAAAGTGTGCTGCTCTCCAGGAACCTACGGTCCCGA  
CTGTCTCGCATGCCAGGGCGGATCCCAGAGGCCCTGCAGCGGGAATGGCCACTGCAGCGGAGATGGGAGCAGACA  
GGGCGACGGGTCTGCCGGTGCCACATGGGGTACCAGGGCCCCGCTGTGCACTGACTGCATGGACGGCTACTTCAG  
CTCGCTCCGGAACGAGACCCACAGCATCTGCACAGCCTGTGACGAGTCCTGCAAGACGTGCTCGGGCCTGACCAA  
CAGAGACTGCGGCGAGTGTGAAGTGGGCTGGGTGCTGGACGAGGGCGCCTGTGTGGATGTGGACGAGTGTGCGGC  
CGAGCCGCTCCCTGCAGCGCTGCGCAGTTCTGTAAGAACGCCAACGGCTCCTACACGTGCGAAGATGTGGACGA  
GTGCTCACTAGCAGAAAAAACCTGTGTGAGGAAAAACGAAAACCTGCTACAATACTCCAGGGAGCTACGTCTGTGT  
GTGTCTGACGGCTTCGAAGAAACGGAAGATGCCTGTGTGCCGCCGGCAGAGCCTGAAGCCACAGAAGGAGAAAG  
CCCGACACAGCTGCCCTCCCGCGAAGACCTGTAATGTGCCGGACTTACCCTTTAAATTATTTCAGAAGGATGTCCC  
GTGGAAAAATGTGGCCCTGAGGATGCCGTCTCCTGCAGTGGACAGCGGCGGGGAGAGGCTGCCTGCTCTCTAACGG  
TTGATTCTCATTGTCCCTTAAACAGCTGCATTTC TTGGTTGTTCTTAAACAGACTTGTATATTTTGATACAGTT  
CTTTGTAATAAAATTGACCATTGTAGGTAATCAGGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 26**

MRLPRRAALGLLPLLLLLPPAPEAAKKPTPCHRCRGLVDKFNQGMVDTAKKNFGGGNTAWEKTL SKYESSEIRL  
LEILEGLCESSDFECNQMLEAQEEHLEAWWLQLKSEYPDFEWFCVKT LKVCCSPGT YGPDCLACQGGSQRPCSG  
NGHCSGDGSRQGDGSCRCHMGYQGPLCTDCMDGYFSSLRNETHS ICTACDESCKTCSGLTNRDCGECEVGWVLDE  
GACVDVDECAAEPFPCSAAQFCKNANGSYTCEDVDECSLAEKTCVRKNENCYNTPGSYVCVCPDGFEETEDACVP  
PAEAEATEGESPTQLPSREDL

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**FIGURE 27**

GTGCAGTTGCGGCTCCAGGGCCATGGCGGAGGAGCAGGGCCGGGAACGGGACTCGGTTCCCAAGCCGTCGGTGCT  
GTTCTCCACCCAGACCTGGGCGTGGGCGGCGCTGAGCGGCTGGTGTTGGACGCGGCGCTGGCGCTGCAGGCGCG  
CGGGTGTAGCGTGAAGATCTGGACAGCGCACTACGACCCGGGCCACTGTTTCGCCGAGAGCCGCGAGCTACCGGT  
GCGCTGTGCCGGGGACTGGCTGCCGCGAGGCCTGGGCTGGGGCGGCCGCGGCGCCGCGCTCTGCGCCTACGTGCG  
CATGGTTTTCTGGCGCTCTACGTGCTGTTCTCGCCGACGAGGAGTTCGACGTGGTAGTGTGCGACCAGGTGTC  
TGCCTGTATCCCAGTGTTTCAAGCTGGCTAGACGGCGGAAGAAGATCCTATTTTACTGTCACTTCCCAGATCTGCT  
TCTCACCAAGAGAGATTCTTTTCTTAAACGACTATACAGGGCCCCAATTGACTGGATAGAGGAATACACCACAGG  
CATGGCAGACTGCATCTTAGTCAACAGCCAGTTTACAGCTGCTGTTTTTAAGGAAACATTCAAGTCCCTGTCTCA  
CATAGACCCTGATGTCCTCTATCCATCTCTAAATGTCACCAGCTTTGACTCAGTTGTTCTTGAAAAGCTGGATGA  
CCTAGTCCCCAAGGGGAAAAAATTCCTGCTGCTCTCCATCAACAGATACGAAAGGAAGAAAAATCTGACTTTGGC  
ACTGGAAGCCCTAGTACAGCTGCGTGGAAGATTGACATCCCAAGATTGGGAGAGGGTTCATCTGATCGTGGCAGG  
TGGTTATGACGAGAGAGTCTTGGAGAATGTGGAACATTATCAGGAATTGAAGAAAATGGTCCAACAGTCCGACCT  
TGGCCAGTATGTGACCTTCTTCAGGTCTTTCTCAGACAAACAGAAAATCTCCCTCCTCCACAGCTGCACGTGTGT  
GCTTTACACACCAAGCAATGAGCACTTTGGCATTGTCCCTCTGGAAGCCATGTACATGCAGTGCCAGTCATTGC  
TGTTAATTGGGGTGGACCTTGGAGTCCATTGACCACAGTGTCACAGGGTTTCTGTGTGAGCCTGACCCGGTGCA  
CTTCTCAGAAGCAATAGAAAAGTTCATCCGTGAACCTTCTTAAAGCCACCATGGGCCTGGCTGGAAGAGCCAG  
AGTGAAGGAAAAATTTTCCCTGAAGCATTTACAGAACAGCTCTACCGATATGTTACCAAACCTGCTGGTATTAATC  
AGATTGTTTTTAAGATCTCCATTAATGTCATTTTTATGGATTGTAGACCCAGTTTGAAGCCAAAAAGAAACCT  
AGAATCTAATGCAGAAGAGATCTTTTAAAAAATAAACTTGAGTCTTGAATGTGAGCCACTTTCCTATATACCACA  
CCTCCCTGTCCACTTTTTCAGAAAAACCATGTCTTTTATGCTATAATCATTCCAAATTTTGCCAGTGTTAAGTTAC  
AAATGTGGTGTGTCATTCCATGTTTACGACAGATATTTTAATTATATTTTCTCGGGATTATTGCTCTTCTGTCTATAA  
ATTTTGAATGATACTGTGCCTTAATTGGTTTTTCATAGTTTAAAGTGTGTATCATTATCAAAGTTGATTAATTTGGC  
TTCATAGTATAATGAGAGCAGGGCTATTGTAGTTCCAGATTCAATCCACCGAAGTGTTCACTGTCTATCTGTTAG  
GGAATTTTTGTTTGTCTGCTTTGCTGGATCCATAGCGAGAGTGCTCTGTATTTTTTTTAAGATAATTTGTAT  
TTTTGCACACTGAGATATAATAAAAGGTGTTTATC

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**FIGURE 28**

MAEEQGRERDSVPKPSVLF LHPDLGVGGAERLVLD AALALQARGCSVKI WTAHYDPGHCFAESREL PVR CAGDWL  
PRGLGWGGRGA AVCA YVRMVFLALYVLF LADEEFDVV VCDQVSACIPV FRLARRRKKILFYCHF PDLLLTKRDSF  
LKRLYRAPIDWIEEYTTGMADCILVNSQFTAAVFKETFKSLSHIDPDVLYPSLNVTSFDSVVPEKLDDLVPKGKK  
FLLLSINRYERKKNLT LALEALVQLRGRLTSQDW ERVHLIVAGGYDERVLENVEHYQELKKMVQQSDLGQYVTF L  
RSFSDKQKISLLHSCTCVLYTPSNEHFGIVPLEAMYMQCPVIAVNSGGPLESIDHSVTGFLCEPD PVHFSEAIEK  
FIREPSLKATMGLAGRARVKEKFSPEAFTEQLYRYVTKLLV

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**FIGURE 29**

GTTATTTATTGACTTTTGCCAAGGCTTGGTCACAACAATCATATTACGTAATTTTCCCCCTTTGGTGGCAGAAC  
TGTAGCAATAGGGGGAGAAGACAAGCAGCGGATGAAGCGTTTTCTCAGCTTTTGGAAATTGCTTCGACCTGACATC  
CGTTGTAACCGTTTGCCACTTCTTCAGATATTTTTATAAAAAAGTACCACTGAGTCAGTGAGGGCCACAGATTGG  
TATTAATGAGATACGAGGGTTGTTGCTGGGTGTTTGTTCCTGAGCTAAGTGATCAAGACTGTAGTGGAGTTGCA  
GCTAACATGGGTTAGGTTTAAACCGTGGGGGATGCAACCCCTTTGCGTTTCATATGTAGGCCTACTGGCTTTGTG  
TAGCTGGAGTAGTTGGGTTGCTTTGTGTTAGGAGGATCCAGATCATGTTGGCTACAGGGAGATGCTCTCTTTGAG  
AGGCTCCTGGGCATTGATTCCATTTCAATCTCATTCTGGATATGTTGTTTCATTGAGTAAAGGAGGAGAGACCCTCA  
TACGCTATTTAAATGTCACCTTTTTGCCTATGCCCCGTTTTTTGGTCATGTTTCAATTAATTGTGAGGAAGGCGC  
AGCTCCTCTCTGCACGTAGATCATTTTTTAAAGCTAATGTAAGCACATCTAAGGGAATAACATGATTTAAGGTTG  
AAATGGCTTTAGAATCATTTGGGTTTGAGGGTGTGTTATTTTGAGTCATGAATGTACAAGCTCTGTGAATCAGAC  
CAGCTTAAATACCCACACCTTTTTTCGTAGGTGGGCTTTTCCTATCAGAGCTTGGCTCATAACCAAATAAAGTT  
TTTTGAAGGCCATGGCTTTTACACAGTTATTTTATTTATGACGTTATCTGAAAGCAGACTGTTAGGAGCAGTA  
TTGAGTGGCTGTCACACTTTGAGGCAACTAAAAGGCTTCAAACGTTTTGATCAGTTTCTTTTCAGGAAACATTG  
TGCTCTAACAGTATGACTATTCTTTCCCCACTCTTAAACAGTGTGATGTGTGTTAT

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**FIGURE 30**

MCSLSKGGETLIRYLNVTFLPMPRFLVMFQLIVRKAQLLSARRSFFKANVSTSKGIT

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**FIGURE 31**

AAAAGCGAGTGAAGAGAGCGCGACGGCGGCGGCGGCGGCGCGCAGCTATTGCTGGACGGCCAGTGGGAGAGCGA  
GGCCTGAGCCTCTGCGTCTAGGATCAAAATGGTTTCAATCCAGAATACTATGAAGGCAAGAACGTCCTCCTCAC  
AGGAGCTACCGGTTTTCTAGGGAAGGTGCTTCTGGAAAAGTTGCTGAGGTCTTGTCTTAAGGTGAATTCAGTATA  
TGTTTTGGTGAGGCAGAAAGCTGGACAGACACCACAAGAGCGAGTGGAAGAAGTCCTTAGTGGAAGCTTTTTGA  
CAGATTGAGAGATGAAAATCCAGATTTTAGAGAGAAAATTATAGCAATCAACAGCGAACTCACCCAACCTAAACT  
GGCTCTCAGTGAAGAAGATAAAGAGGTGATCATAGATTCTACCAATATTATATTCCACTGTGCAGCTACAGTAAG  
GTTTAATGAAAATTTAAGGGATGCTGTTCAAGTTAAATGTGATTGCAACGCGACAGCTTATTCTCCTTGCAACA  
AATGAAGAATCTGGAAGTGTTTCATGCATGTATCAACAGCATATGCCTACTGTAATCGCAAGCATATTGATGAAGT  
AGTCTATCCACCACCTGTGGATCCCAAGAAGCTGATTGATTCTTTAGAGTGGATGGATGATGGCCTAGTAAATGA  
TATCACGCCAAAATTGATAGGAGACAGACCTAATACATACATATACACAAAAGCATTGGCAGAATATGTTGTACA  
ACAAGAAGGAGCAAAACTAAATGTGGCAATTGTAAGGCCATCGATTGTTGGTGCCAGTTGGAAAGAACCTTTTCC  
AGGATGGATTGATAACTTTAATGGACCAAGTGGTCTCTTTATTGCGGCAGGGAAAGGAATTCTTCGAACAATACG  
TGCTTCCAACAATGCCCTTGCAAGTCTTGTTCTGTAGATGTAGTTGTCAACATGAGTCTTGCGGCAGCCTGGTA  
TTCCGGAGTTAATAGACCAAGAAACATCATGGTGTATAATTGTACAACAGGCAGCACTAATCCTTTCCACTGGGG  
TGAAGTTGGTATGATTTTACCTGTGTTTTTGAATGTTAGAATAAATCTTAAAGAACCAAAAAAAAAAAAAAAAAAAA  
AAAAAA



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**FIGURE 32**

MVSIPEYYEGKNVLLTGATGFLGKVLLLEKLLRSCP KVNSVYVLVRQKAGQTPQERVEEVLSGKLFDRRLDENPDF  
REKIIAINSELTQPKLALSEEDKEVIIDSTNIIFHCAATVRFNENLRDAVQLNVIATRQLILLAQQMKNLEVFMH  
VSTAYAYCNRKHIDEVVYPPPVDEPKKLIDSLEWMDDGLVNDITPKLIGDRPNTYIYTKALAEYVVQQEGAKLNVA  
IVRPSIVGASWKEPFPGWIDNFNGPSGLFIAAGKGILRTIRASNNALADLVPVDVVVNMSLAAAWYSGVNRPRNI  
MVYNCTTGSTNPFHWGEVGMILPVFLNVRINLKEPKKKKKK

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**FIGURE 33**

GAACGAGGGTCCTAGCTGCCGCCACCCGAACAGCCTGTCCTGGTGCCCCGGCTCCCTGC~~CCC~~CGCCCCAGTCATG  
ACCCTGCGCCCCTCACTCCTCCCGCTCCATCTGCTGCTGCTGCTGCTGCTCAGTGCGGCGGTGTGCCGGGCTGAG  
GCTGGGCTCGAAACCGAAAGTCCCGTCCGGACCCCTCCAAGTGGAGACCCTGGTGGAGCCCCCAGAACCATGTGCC  
GAGCCCGCTGCTTTTGGAGACACGCTTCACATACACTACACGGGAAGCTTGGTAGATGGACGTATTATTGACACC  
TCCCTGACCAGAGACCCTCTGGTTATAGAAGCTTGGCCAAAAGCAGGTGATTCCAGGTCTGGAGCAGAGTCTTCTC  
GACATGTGTGTGGGAGAGAAGCGAAGGGCAATCATTCCTTCTCACTTGGCCTATGGAAAACGGGGATTTCACCA  
TCTGTCCCAGCGGATGCAGTGGTGCAGTATGACGTGGAGCTGATTGCACTAATCCGAGCCAACTACTGGCTAAAG  
CTGGTGAAGGGCATTCTTGCCTCTGGTAGGGATGGCCATGGTGCCAGCCCTCCTGGGCCTCATTGGGTATCACCTA  
TACAGAAAGGCCAATAGACCCAAAGTCTCCAAAAAGAAGCTCAAGGAAGAGAAACGAAACAAGAGCAAAAAGAAA  
TAATAAATAATAAATTTAAAAAACTTAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 34**

MTLRPSLLPLHLLLLLLLLLSAAVCRAEAGLETESPVRTLQVETLVEPPEPCAEPAAFGDTLHIHYTGSLVDGRIID  
TSLTRDPLVIELGQKQVIPGLEQSLDMCVGEKRRAIIPSHLAYGKRGFPSPADAVVQYDVELIALIRANYWL  
KLVKGILPLVGMAMVPALLGLIGYHLYRKANRPKVSKKKLKEEKRNKSKKK

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**FIGURE 35**

CCTATTCTACGGCTGACCCCTGGTGGTCACGTGGATCTGTTTCGCCACGCAAGTCTGGGTCCTTCGGCGATTGACC  
GGGGTCCTTGCTGTTTCGGGAGCCTCTCCTAAGCTGCCTGTTTCGCGGAGAGTTTGGAGGGGCGGGTTTGGGGTCG  
GTGTCTGATTGGGGCTCGCACCCGACGACGCTGGAGTCCCGCTTAGGTACCAGTTAGCGTCAGGGGAGCTGGGGTC  
AGGCGGTGCGCCGGGACACCCCGTGTGTGGCAGGCGGCGAAGCGCTCTGGAGAATCCCGGACAGCCCTGCTCCCTG  
CAGCCAGGTGTAGTTTCGGGAGCCACTGGGGCCAAAGTGAGAGTCCAGCGGTCTTCCAGCGCTTGGGCCACGGCG  
GCGGCCCTGGGAGCAGAGGTGGAGCGACCCATTACGCTAAAGATGAAGGCTGGGGTTGGCTGGCCCTGCTTCT  
GGGGGCCCTGCTGGGAACCGCCTGGGCTCGGAGGAGCCAGGATCTCCACTGTGGAGCATGCAGGGCTCTGGTGGA  
TGAAGTAGAATGGGAAATTGCCCAGGTGGACCCCAAGAAGACCATTGAGATGGGATCTTTCGGATCAATCCAGA  
TGGCAGCCAGTCAGTGGTGGAGGTGCCTTATGCCCCTCAGAGGCCACCTCACAGAGCTGCTGGAGGAGATATG  
TGACCGGATGAAGGAGTATGGGGAACAGATTGATCCTTCCACCCATCGCAAGAACTACGTACGTGTAGTGGGCCG  
GAATGGAGAATCCAGTGAAGTGGACCTACAAGGCATCCGAATCGACTCAGATATTAGCGGCACCCTCAAGTTTGC  
GTGTGAGAGCATTGTGGAGGAATACGAGGATGAACTCATTGAATTCTTTTCCCGAGAGGCTGACAATGTTAAAGA  
CAAACCTTTGCAGTAAGCGAACAGATCTTTGTGACCATGCCCTGCACATATCGCATGATGAGCTATGAACCACTGG  
AGCAGCCACACTGGCTTGATGGATCACCCCCAGGAGGGGAAAATGGTGGCAATGCCTTTTATATATTATGTTTT  
TACTGAAATTAAGTGAAGAAATATGAAACC

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**FIGURE 36**

MKGWGWLALLLGALLGTAWARRSQDLHCGACRALVDELEWEIAQVDPKKTIQMGSFRINPDGSQSVVEVPYARSE  
AHLTELLEEICDRMKEYGEQIDPSTHRKNYVRVVGVRNGESSELDLQGIRIDSDISGTLKFACESIVEEYEDIELIE  
FFSREADNVKDKLCSKRTDLCDHALHISHDEL

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**FIGURE 37**

GAGGTTGAAGGACCCAGGCGTGTGAGCCCTGCTCCAGAGACCTTGGGC**ATCG**GAGGAGAGTGTGCTACGGCCCTCA  
GTGTTTGTGGTGGATGGACAGACCGACATCCCATTCACGAGGCTGGGACGAAGCCACCGGAGACAGTCGTGCAGT  
GTGGCCCGGGTGGGTCTGGGTCTCTTGCTGTTGCTGATGGGGGCTGGGCTGGCCGTCCAAGGCTGGTTCCTCCTG  
CAGCTGCACTGGCGTCTAGGAGAGATGGTCACCCGCCTGCCTGACGGACCTGCAGGCTCCTGGGAGCAGCTGATA  
CAAGAGCGAAGGTCTCACGAGGTCAACCCAGCAGCGCATCTCACAGGGGCCAACTCCAGCTTGACCGGCAGCGGG  
GGGCCGCTGTTATGGGAGACTCAGCTGGGCCTGGCCTTCCTGAGGGGCCTCAGCTACCACGATGGGGCCCTTGTG  
GTCACCAAAGCTGGCTACTACTACATCTACTCCAAGGTGCAGCTGGGCGGTGTGGGCTGCCCGCTGGGCCTGGCC  
AGCACCATCACCCACGGCCTCTACAAGCGCACACCCCGCTACCCCGAGGAGCTGGAGCTGTTGGTCAGCCAGCAG  
TCACCTGCGGACGGGCCACCAGCAGCTCCCGGTCTGGTGGGACAGCAGCTTCCTGGGTGGTGTGGTACACCTG  
GAGGCTGGGGAGGAGGTGGTCCGTGCTGCTGGA TGAACGCCTGGTTCGACTGCGTGATGGTACCCGGTCTTAC  
TTCGGGGCTTTCATGGTG**TGA**AAGGAAGGAGCGTGGTGCATTGGACATGGGTCTGACACGTGGAGAACTCAGAGGG  
TGCCTCAGGGGAAAGAAAACCTACGAAGCAGAGGCTGGGCGTGGTGGCTCTCGCCTGTAATCCAGCACTTTGGG  
AGGCCAAGGCAGGCGGATCACCTGAGGTCAGGAGTTCGACACCAGCCTGGCTAACATGGCAAAACCCCATCTCTA  
CTAAAAATACAAAATTAGCCGGACGTGGTGGTGCCTGCCTGTAATCCAGCTACTCAGGAGGCTGAGGCAGGATA  
ATTTTGCTTAAACCCGGGAGGCGGAGGTTGCAGTGAGCCGAGATCACACCACTGCACTCCAACCTGGGAAACGCA  
GTGAGACTGTGCCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 38**

MEESVVRPSVFVVDGQTDIPFTRLGRSHRRQSCSVARVGLGLLLLLMGAGLAVQGWFLLQLHWRLGEMVTRLPDG  
PAGSWEQLIQERRSHEVNPA AHLTGANSSLTGSGGPLLWETQLGLAFLRGLSYHDGALVVTKAGYYYYISKVQLG  
GVGCPLGLASTITHGLYKRTPRYPEELELLVSQQSPCGRATSSSRVWWDSSFLGGVVHLEAGEEVVVRVLDERLV  
RLRDGTRSYFGAFMV

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**FIGURE 39**

GGCACGAGGGGAGTGGAAGTTCTCCGGCAGCCCTGAGATCTCAAGAGTGACATTTGTGAGACCAGCTAATTTGA  
TTAAAATTCTCTTGGAATCAGCTTTGCTAGTATCATACCTGTGCCAGATTTCAATCATGGGAAACAGCTGTTACAA  
CATAGTAGCCACTCTGTTGCTGGTCCTCAACTTTGAGAGGACAAGATCATTGCAGGATCCTTGTAGTAAGTCCCC  
AGCTGGTACATTCTGTGATAATAACAGGAATCAGATTTGCAGTCCCTGTCTCCAAATAGTTTTCTCCAGCGCAGG  
TGGACAAAGGACCTGTGACATATGCAGGCAGTGTAAGGTGTTTTAGGACCAGGAAGGAGTGTTCTCCACCAG  
CAATGCAGAGTGTGACTGCACTCCAGGGTTTTCACTGCCTGGGGGCAGGATGCAGCATGTGTGAACAGGATTGTAA  
ACAAGGTCAAGAACTGACAAAAAAGGTTGTAAAGACTGTTGCTTTGGGACATTTAACGATCAGAAACGTGGCAT  
CTGTGACCCCTGGACAACTGTTCTTTGGATGGAAAGTCTGTGCTTGTGAATGGGACGAAGGAGAGGGACGTGGT  
CTGTGGACCATCTCCAGCCGACCTCTCTCCGGGAGCATCTCTGTGACCCCGCTGCCCTGCGAGAGAGCCAGG  
ACACTCTCCGCAGATCATCTCCTTCTTTCTTGCCTGACGTCGACTGCGTTGCTCTTCTGCTGTTCTTCTCAC  
GCTCCGTTTTCTGTTGTTAAACGGGGCAGAAAGAACTCCTGTATATATTCAAACAACCATTTATGAGACCAGT  
ACAACTACTCAAGAGGAAGATGGCTGTAGCTGCCGATTTCCAGAAGAAGAAGAGGAGGATGTGAAGTGTGAAA  
TGGAAGTCAATAGGGCTGTTGGGACTTTCTTGAAAAGAAGCAAGGAAATATGAGTCATCCGCTATCACAGCTTTC  
AAAAGCAAGAACACCATCTACATAATACCCAGGATCCCCCAACACACGTTCTTTTCTAAATGCCAATGAGTTG  
GCCTTTAAAAATGCACCACTTTTTTTTTTTTTTTGTACAGGGTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGC  
ACCACCATGGCTCTCTGCAGCCTTGACCTCTGGGAGCTCAAGTGATCCTCCTGCCTCAGTCTCCTGAGTAGCTGG  
AACTACAAGGAAGGGCCACCACACCTGACTAACTTTTTTGTGTTTTGTTTGGTAAAGATGGCATTTCACCATGTT  
GTACAGGCTGGTCTCAAACCTCCTAGGTTCACTTTGGCCTCCCAAAGTGCTGGGATTACAGACATGAAGTCCAGG  
CCCGGCCAAAATAATGCACCACTTTAAACAGAACAGACAGATGAGGACAGAGCTGGTGATAAAAAAAAAAAAAA  
AAAGCATTTTCTAGATACCACTTAACAGGTTTGAGCTAGTTTTTTTGAAATCCAAAGAAAATTATAGTTTAAATT  
CAATTACATAGTCCAGTGGTCCAACATAATTATAATCAAAATCAATGCAGGTTGTTTTTTGGTGCTAATATGA  
CATATGACAATAAGCCACGAGGTGCAGTAAGTACCCGACTAAAGTTTCCGTGGGTCTGTGTCATGTAACACGACAT  
GCTCCACCGTCAGGGGGGAGTATGAGCAGAGTGCTGAGTTTAGGGTCAAGGACAAAAACCTCAGGCCTGGAGG  
AAGTTTTGGAAGAGTTCAAGTGTCTGTATATCCTATGGTCTTCTCCATCCTCACACCTTCTGCCTTTGTCTGC  
TCCCTTTTAAGCCAGGTTACATTCTAAAAATTCTTAACTTTAAACATAATATTTTATACCAAAGCCAATAAATGA  
ACTGCATATGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 40**

MGNSCYNIVATLLLVLNFERTRSLQDPCSNCPAGTFCDNNRNQICSPCPPNSFSSAGGQRTCDICRQCKGVFTR  
KECSSTSNAECDCTPGFHCLGAGCSMCEQDCKQGQELTKKGCKDCCFGTFNDQKRGICRPWTNCSLDGKSVLVNG  
TKERDVVCGPSPADLSPGASSVTPPAPAREPGHSPQIISFFLALTSTALLFLLFFLTTLRFSVVKRGRKKLLYIFK  
QPFMRPVQTTQEEDGCSCRFPEEEEGGCEL

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**FIGURE 41**

GGAACAAAAGCTGGAGCTCCACCGCGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGGAATTCGG  
CACGAGCAGAAGAGGGGGCTAGCTAGCTGTCTCTGCGGACCAGGGGAGACCCCGCGCCCCCGGTGTGAGGCGG  
CCTCACAGGGCCGGGTGGGCTGGCGAGCCGACGCGGCGGCGGAGGAGGCTGTGAGGAGTGTGTGGAACAGGACCC  
GGGACAGAGGAACCAATGGCTCCGCAGAACCTGAGCACCTTTTGCTGTGCTGCTATACCTCATCGGGGCGGTGA  
TTGCCGGACGAGATTTCTATAAGATCTTGGGGGTGCCTCGAAGTGCCTCTATAAAGGATATTAAAAAGGCCTATA  
GGAACTAGCCCTGCAGCTTCATCCCGACCGGAACCTGATGATCCACAAGCCCAGGAGAAATTCAGGATCTGG  
GTGCTGCTTATGAGGTTCTGTGATAGTAGAGAAACGGAAACAGTACGATACTTATGGTGAAGAAGGATTAAAAG  
ATGGTCATCAGAGCTCCCATGGAGACATTTTTTCACACTTCTTTGGGGATTTTGGTTTCATGTTTGGAGGAACCC  
CTCGTCAGCAAGACAGAAATATTCCAAGAGGAAGTGATATTATTGTAGATCTAGAAGTCACTTTGGAAGAAGTAT  
ATGCAGGAAATTTTGTGGAAGTAGTTAGAAACAAACCTGTGGCAAGGCAGGCTCCTGGCAAACGGAAGTGCAATT  
GTCGGCAAGAGATGCGGACCACCCAGCTGGGGCCCTGGGCGCTTCCAAATGACCCAGGAGGTGGTCTGCGACGAAT  
GCCCTAATGTCAAACCTAGTGAATGAAGAACGAACGCTGGAAGTAGAAATAGAGCCTGGGGTGAGAGACGGCATGG  
AGTACCCCTTTATTGGAGAAGGTGAGCCTCACGTGGATGGGGAGCCTGGAGATTTACGGTTCCGAATCAAAGTTG  
TCAAGCACCAATATTTGAAAGGAGAGGAGATGATTTGTACACAAATGTGACAAATCTCATTAGTTGAGTCACTGG  
TTGGCTTTGAGATGGATATTACTCACTTGGATGGTCACAAGGTACATATTTCCCGGGATAAGATCACCAGGCCAG  
GAGCGAAGCTATGGAAGAAAGGGGAAGGGCTCCCCAACTTTGACAACAACAATATCAAGGGCTCTTTGATAATCA  
CTTTTGATGTGGATTTTCCAAAAGAACAGTTAACAGAGGAAGCGAGAGAAGGTATCAAACAGCTACTGAAACAAG  
GGTCAGTGCAGAAGGTATACAATGGACTGCAAGGATATTGAGAGTGAATAAAATTGGACTTTGTTTAAAATAAGT  
GAATAAGCGATATTTATTATCTGCAAGGTTTTTTTGTGTGTGTTTTTGTATTTTCAATATGCAAGTTAGGC  
TTAATTTTTTTTATCTAATGATCATCATGAAATGAATAAGAGGGCTTAAGAATTTGTCCATTTGCATTTCGAAAAG  
AATGACCAGCAAAGGTTTACTAATACGTCTCCCTTTGGGGATTTAATGTCTGGTGCTGCCGCCTGAGTTTCAAG  
AATTAAAGCTGCAAGAGGACTCCAGGAGCAAAGAAACACAATATAGAGGGTTGGAGTTGTTAGCAATTTTCATTC  
AAAATGCCAACTGGAGAAGTCTGTTTTTAAATACATTTTGTGTTATTTTT

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**FIGURE 42**

MAPQNLSTFCLLLLYLIGAVIAGRDFYKILGVPRSASIKDIKKAYRKALQLHPDRNPDDPQAQEKFQDLGAAYE  
VLSDSEKRKQYDTYGEGLKDGHQSSHGDIFSHFFGDFGFMFGGTPRQQDRNIPRGSDIIVDLEVTLEEVYAGNF  
VEVVRNKPVARQAPGKRKCNCRQEMRTTQLGPGRFQMTQEVVCECPNVKLVNEERTLEVEIEPGVRDGMEYFPI  
GEGEPHVDGEPGDLRFRIKVVKHPIFERRGDDLYTNVTISLVESLVGFEMDITHLDGHKVHISRDKITRPGAKLW  
KKGEGLPNFDNNNIKGSLIITFDVDFPKEQLTEEAREGIKQLLKQGSVQKVYNGLQGY

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**FIGURE 43**

GACAGTGGAGGGCAGTGGAGAGGACCGCGCTGTCTGCTGTACCAAGAGCTGGAGACACCATCTCCCACCGAGA  
GTCATGGCCCCATTGGCCCTGCACCTCCTCGTCCTCGTCCCATCCTCCTCAGCCTGGTGGCCTCCCAGGACTGG  
AAGGCTGAACGCAGCCAAGACCCCTTCGAGAAATGCATGCAGGATCCTGACTATGAGCAGCTGCTCAAGGTGGTG  
ACCTGGGGGCTCAATCGGACCCTGAAGCCCCAGAGGGTGATTGTGGTTGGCGCTGGTGTGGCCGGGCTGGTGGCC  
GCCAAGGTGCTCAGCGATGCTGGACACAAGGTCACCATCCTGGAGGCAGATAACAGGATCGGGGGCCGCATCTTC  
ACCTACCGGGACCAGAACACGGGCTGGATTGGGGA GCTGGGAGCCATGCGCATGCCCAGCTCTCACAGGATCCTC  
CACAAGCTCTGCCAGGGCCTGGGGCTCAACCTGACCAAGTTCACCCAGTACGACAAGAACACGTGGACGGAGGTG  
CACGAAGTGAAGCTGCGCAACTATGTGGTGGAGAAAGGTGCCCGAGAAGCTGGGCTACGCCTTGCGTCCCCAGGAA  
AAGGGCCACTCGCCCCGAAGACATCTACCAGATGGCTCTCAACCAGGCCCTCAAAGACCTCAAGGCACTGGGCTGC  
AGAAAGGCGATGAAGAAGTTTGAAAGGCACACGCTCTTGGAATATCTTCTCGGGGAGGGGAACCTGAGCCGGCCG  
GCCGTGCAGCTTCTGGGAGACGTGATGTCCGAGGATGGCTTCTTCTATCTCAGCTTCGCCGAGGGCCCTCCGGGCC  
CACAGCTGCCCTCAGCGACAGACTCCAGTACAGCCGCATCGTGGGTGGCTGGGACCTGCTGCCGCGCGCGCTGCTG  
AGCTCGCTGTCCGGGCTTGTGCTGTTGAACGCGCCCGTGGTGGCGATGACCCAGGGACCGCACGATGTGCACGTG  
CAGATCGAGACCTCTCCCCCGGCGCGGAATCTGAAGGTGCTGAAGGCCGACGTGGTGTGCTGACGGCGAGCGGA  
CCGGCGGTGAAGCGCATCACCTTCTCGCCGCCGCTGCCCGCCACATGCAGGAGGCGCTGCGGAGGCTGCACTAC  
GTGCCGGCCACCAAGGTGTTCTTAAGCTTCCGCAGGCCCTTCTGGCGCGAGGAGCACATTGAAGGCGGCCACTCA  
AACACCGATCGCCCGTCGCGCATGATTTTCTACCCGCCGCCGCGCGAGGGCGCGCTGCTGCTGGCCTCGTACACG  
TGGTCGGACGCGGCGGCAGCGTTTCGCCGGCTTGAGCCGGGAAGAGGCGTTGCGCTTGGCGCTCGACGACGTGGCG  
GCATTGCACGGGCCTGTCTGTGCGCCAGCTCTGGGACGGCACCGGCGTCTCAAGCGTTGGGCGGAGGACCAGCAC  
AGCCAGGGTGGCTTTGTGGTACAGCCGCCGGCGCTCTGGCAAACCGAAAAGGATGACTGGACGGTCCCTTATGGC  
CGCATCTACTTTGCCGGCGAGCACACCGCCTACCCGCACGGCTGGGTGGAGACGGCGGTCAAGTCGGCGCTGCGC  
GCCGCCATCAAGATCAACAGCCGGAAGGGGCCTGCATCGGACACGGCCAGCCCCGAGGGGCACGCATCTGACATG  
GAGGGGCAGGGGCATGTGCATGGGGTGGCCAGCAGCCCCTCGCATGACCTGGCAAAGGAAGAAGGCAGCCACCCT  
CCAGTCCAAGGCCAGTTATCTCTCCAAAACACGACCCACACGAGGACCTCGCATTAAAGTATTTTCGGAAAAA

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**FIGURE 44**

MAPLALHLLVLPILLSLVASQDWKAERSQDPFEKCMQDPDYEQLLKVVWGLNRTLKPQRVIVVGAGVAGLVAA  
KVLSDAGHKVTILEADNRIGGRIFTYRDQNTGWIGELGAMRMPSSHRILHKLCQGLGLNLTKFTQYDKNTWTEVH  
EVKLRNYVVEKVPEKLGALRPQEKGHSPEDIYQMALNQALKDLKALGCRKAMKKFERHTLLEYLLGEGNLSRPA  
VQLLDVMSSEDGFFYLSFAEALRAHSCLSDRLOYSRIVGGWDLPRALLSSLSGLVLLNAPVVAMTQGP HDVHVQ  
IETSPPARNLKVLKADVLLTASGPAVKRITFSPP LPRHMQEALRRLHYVPATKVFLSFRPFWREEHIEGGHSN  
TDRPSRMIFYPPPPREGALLLASYTWSDAFAAGLSREEALRLALDDVAALHGPVVRQLWDGTGVVVRWAEDQHS  
QGGFVVQPPALWQTEKDDWTVPYGRIYFAGEHTAYPHGWVETAVKSALRAAIKINSRKGPASDTASPEGHASDME  
GQGHVHGVASSPSHDLAKEEGSHPPVQQLSLQNTTHTRTSH

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**FIGURE 45**

TGCACAAGCAGAATCTTCAGAACAGGTTCTCCTTCCCCAGTCACCAGTTGCTCGAGTTAGAATTGTCTGCAATGG  
CCGCCCTGCAGAAATCTGTGAGCTCTTTCCCTTATGGGGACCCTGGCCACCAGCTGCCTCCTTCTCTTGGCCCTCT  
TGGTACAGGGAGGAGCAGCTGCGCCCATCAGCTCCCACTGCAGGCTTGACAAGTCCAACTTCCAGCAGCCCTATA  
TCACCAACCGCACCTTCATGCTGGCTAAGGAGGCTAGCTTGGCTGATAACAACACAGACGTTCGTCTCATTGGGG  
AGAAACTGTTCCACGGAGTCAGTATGAGTGAGCGCTGCTATCTGATGAAGCAGGTGCTGAACTTCACCCTTGAAG  
AAGTGCTGTTCCCTCAATCTGATAGGTTCCAGCCTTATATGCAGGAGGTGGTGCCCTTCCCTGGCCAGGCTCAGCA  
ACAGGCTAAGCACATGTCATATTGAAGGTGATGACCTGCATATCCAGAGGAATGTGCAAAAGCTGAAGGACACAG  
TGAAAAAGCTTGGAGAGAGTGGAGAGATCAAAGCAATTGGAGAAGCTGGATTTGCTGTTTATGTCTCTGAGAAATG  
CCTGCATTGACCAGAGCAAAGCTGAAAAATGAATAACTAACCCCCTTTCCCTGCTAGAAATAACAATTAGATGC  
CCCAAAGCGATTTT

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**FIGURE 46**

MAALQKSVSSFLMGTLATSCLLLLALLVQGGAAAP ISSHCRLDKSNFQQPYITNRTFMLAKEASLADNNTDVRLI  
GEKLFHGVSMSERCYLMKQVLNFTLEEVLPQSDRFQPYMQEVVPFLARLSNRLSTCHIEGDDLHIQRNVQKLKD  
TVKKLGESGEIKAIGELDLLFMSLRNACI

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**FIGURE 47**

GAGGGGTAGAGATGCAGAAAGGCAGAAAGGAGAAAATTCAGGATAACTCTCCTGAGGGGTGAGCCAAGCCCTGCC  
ATGTAGTGCACGCAGGACATCAACAAACACAGATAACAGGAAATGATCCATTCCCTGTGGTCACTTATTCTAAAG  
GCCCCAACCTTCAAAGTTCAAGTAGTGATATGGATGACTCCACAGAAAGGGAGCAGTCACGCCTTACTTCTTGCC  
TTAAGAAAAGAGAAGAAATGAAACTGAAGGAGTGTGTTTCCATCCTCCCACGGAAGGAAAGCCCCTCTGTCCGAT  
CCTCCAAAGACGGAAAGCTGCTGGCTGCAACCTTGCTGCTGGCACTGCTGTCTTGCTGCCTCACGGTGGTGTCTT  
TCTACCAGGTGGCCGCCCTGCAAGGGGACCTGGCCAGCCTCCGGGCAGAGCTGCAGGGCCACCACGCGGAGAAGC  
TGCCAGCAGGAGCAGGAGCCCCAAGGCCGGCCTGGAGGAAGCTCCAGCTGTCACCGCGGGACTGAAAATCTTTG  
AACCACCAGCTCCAGGAGAAGGCAACTCCAGTCAGAACAGCAGAAATAAGCGTGCCGTTTCAGGGTCCAGAAGAAA  
CAGTCACTCAAGACTGCTTGCAACTGATTGCAGACAGTGAAACACCAACTATACAAAAGGATCTTACACATTTG  
TTCCATGGCTTCTCAGCTTTAAAAGGGGAAGTGCCCTAGAAGAAAAAGAGAATAAAATATTGGTCAAAGAACTG  
GTTACTTTTTTATATATGGTCAGGTTTTATATACTGATAAGACCTACGCCATGGGACATCTAATTCAGAGGAAGA  
AGGTCCATGTCTTTGGGGATGAATTGAGTCTGGTGACTTTGTTTCGATGTATTCAAATATGCCTGAAACACTAC  
CCAATAATTCCTGCTATTCAGCTGGCATTGCAAACTGGAAGAAGGAGATGAACTCCAATTGCAATACCAAGAG  
AAAATGCACAAATATCACTGGATGGAGATGTCACATTTTTTGGTGCAATTGAACTGCTGTGACCTACTTACACCA  
TGTCTGTAGCTATTTTCCCTCCCTTTCTCTGTACCTCTAAGAAGAAAGAATCTAACAGAAAAAAAAAAAAAAAAAA  
AAAAAAAAAA



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**FIGURE 48**

MDDSTEREQSRLTSCCLKKREEMKLKECVSILPRKESPSVRSSKDGKLLAATLLLALLSCCLTVVSFYQVAALQGD  
LASLRAELQGHHAEKLPAGAGAPKAGLEEAPAVTAGLKIFEPPAPGEGNSSQNSRNKRAVQGPEETVTQDCLQLI  
ADSETPTIQKGSYTFVPWLLSFKRGSAL EEKENKILVKETGYFFIYGQVLYTDKTYAMGHLIQRKKVHVFGDELS  
LVTLFRCIQNMPETLPNNSCYSAGIAKLEEGDELQLAIPRENAQISLDGDVTFFGALKLL

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**FIGURE 49**

AGTGCGTGAGTTTGGTGGCGGCCGGCTGTGCAGAGACGCCATGTACCGGCTCCTGTCAGCAGTGACTGCCCCGGGC  
TGCCGCCCCCGGGGGCTTGGCCTCAAGCTGCGGACGACGCGGGGTCCATCAGCGCGCCGGGCTGCCGCTCTCGG  
CCACGGCTGGGTGCGGGGCTCGGGCTGGGGCTGGGGCTGGCGCTCGGGGTGAAGCTGGCAGGTGGGCTGAGTGG  
CGCGGCCCGGCGCAGTCCCCCGCGGCCCGACCTGAGGCGTCGCCTCTGGCCGAGCCGCCACAGGAGCAGTC  
CCTCGCCCCGTGGTCTCCGCAGACCCCGCGCCGCCCTGCTCCAGGTGCTTCGCCAGAGCCATCGAGAGCAGCCG  
CGACCTGCTGCACAGGATCAAGGATGAGGTGGGCGCACCGGGCATAGTGGTTGGAGTTTCTGTAGATGGAAGA  
AGTCTGGTCAGAAGGTTTAGGTTATGCTGATGTTGAGAACCGTGTACCATGTAAACCAGAGACAGTTATGCGAAT  
TGCTAGCATCAGCAAAAGTCTCACCATGGTTGCTCTTGCCAAATTGTGGGAAGCGGGGAAACTGGATCTTGATAT  
TCCAGTACAACATTATGTTCCCGAATTCCCAGAAAAAGAATATGAAGGTGAAAAGGTTTCTGTCAACAAGATT  
ACTGATTTCCCATTTAAGTGGAATTCGTCATTATGAAAAGGACATAAAAAAGGTGAAAGAAGAGAAAGCTTATAA  
AGCCTTGAAGATGATGAAAAGAGAATGTTGCATTTAGCAAGAAAAAGAAGGCAAAAGTAATGAAAAGAATGATTT  
TACTAAATTTAAACAGAGCAGGAGAATGAAGCCAAATGCCGGAATTCAAAACCTGGCAAGAAAAAGAATGATTT  
TGAACAAGGCGAATTATATTTGAGAGAAAAGTTTGAAAATTCATTGAATCCCTAAGATTATTTAAAAATGATCC  
TTTGTTCCTTCAAACCTGGTAGTCAGTTTTTGTATTCAACTTTTGGCTATACCCTACTGGCAGCCATAGTAGAGAG  
AGCTTCAGGATGTAAATATTTGGACTATATGCAGAAAAATATTCATGACTTGGATATGCTGACGACTGTGCAGGA  
AGAAAACGAGCCAGTGATTACAAATAGAGCAAGGTAAATGAAATACCTTCTGCTGTGTCTAGCTATATCGCATCTT  
AACACTATTTTATTAATTTAAAGTCAAATTTTCTTTGTTTCCATTCCAAAATCAACCTGCCACATTTTGGGAGCT  
TTTCTACATGTCTGTTTTCTCATCTGTAAAGTGAAAGGAAGTAAACATGTTTATAAAGTACACTAAGACCTTTG  
ATGAAAGATAGCAATAATATTAATAATTCAAACATGAATACTAAACCAAAATTGCACCCACCATGAGCATCTGT  
AATTTGCTCTTTAACCATTCTTTTTTAGGTTTTAACTAATACTTTGTTTACGTGTTATTAGTTTTTAATTGTTT  
TCATACTGTTTTGAAATAATTTTATACTTATAGAAAAGTTGCAAGAGTAGTACAAAGGATTCACATATCCTCTTT  
ACTCAGATTCCCTTAATGTTAGTTTACCGCATTTCATTACCTTTCTGTCTACATATGTGTTTGTCTGAACCA  
TTTGGAATAAGTTGTAGACGTGATACCCCTTTACCTATAAATATTTACATGTGTATTTTCTAAAAACAAGGACA  
TTCAGGGCCGGGTGCAGTGGCTCACGCCTGTAATCCCAACACTTTGGAAGGCCGAGGTGGGTGGATCACCTGAGG  
TCAGGAGTTCAAGACCAGCCTGGCCAATGTGGTGAAATCAACCTCTCTCTACTAAAAATGCAAAAATTAGCCAG  
GTGTGGTGGCGGGTGCTTATAATCCCAGCCACGCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGTGG  
AGTTGCAGTAAGCCAAGATCGTGCCCCTGCACTTCAGGCTGGGCGAAAGAGTGAGACTCCATGTCAAAAAAGGAT

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**FIGURE 50**

MYRLLSAVTARAAAPGGLASSCGRRGVHQRAGLPPLGHGWVGGGLGLGLGLALGVKLAGGLSGAAPAQSPAAPDPE  
ASPLAEPPQEQSLAPWSPQTPAPPSCRCFARAIESSRDLLHRIKDEVGAPGIVVGVSVDGKEVWSEGLGYADVEN  
RVPCKPETVMRIASISKSLTMVALAKLWEAGKLDLDIPVQHYVPEFPEKEYEGEKVSVTTRLLISHLSGIRHYEK  
DIKKVKEEKAYKALKMMKENVAFEQEKEGKSNEKNDFTKFKTEQENEAKCRNSKPGKKKNDFEQGELYLREKFEN  
SIESLRLFKNDPLFFKPGSQFLYSTFGYTLLAAIVERASGCKYLDYMQKIFHDLDMLETTVQEENEPIYNRAR

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**FIGURE 51**

GGAGCCCATGATTTCTGGAAGAGCCCTAGAGCTTGGCTTTTCTCTCCTGCAGCACTTAACCGAAACCAGTTTT  
GCAATCAATTCCTGTTCAAAGGCSACCCTACTCTTCCTATCCGTCTTTCTCCAGCCCAGACACTCACAGCCCCCT  
GCCAGACCAGGGGACCTCGGAGAGGCAAGGACAGAGGTTTCAGGATCTTCCTCTCCCTCGGGACCCAAGGSCACAA  
AGGAGAGCTCCGTGGAGAGAAGAAAATCATTGAC TCCTGGGGACACAGATTTGCTGCCACAGAGGCTGATGGAC  
AACCAGGCGGAGAGAGAAAGTGAGGCTGGTGTGGTTTGCAAAGGGATGAGGATGACGCTCCTCTGTGTGAAGAC  
GTGGAGCTACAAGACGGAGATCTGTCCCCGAAGAAAAAATATTTTGGAGAGAATTTCCCAGATTGAAAGAAGAT  
CTGAAAGGGAACATTGACAAGCTCCGTGCCCTCGCAGACGATATTGACAAAACCCACAAGAAATTCACCAAGGCT  
AACATGGTGGCCACCTCTACTGCTGTCTCTGGAGTGATGAGCCTCCTGGGTTTAGCCCTTGCCCCAGCAACA  
GGAGGAGGAAGCCTGCTGCTCTCCACCGCTGGTCAAGGTTTGGAACAGCAGCTGGGGTCACCAGCATCGTGAGT  
GGTACGTTGGAACGCTCCAAAAATAAAGAAGCCCAAGCACGGGCGGAAGACATACTGCCACCTACGACCAAGAG  
GACAGGGAGGATGAGGAAGAGAAGGCAGACTATGT CACAGCTGCTGGAAAGATTATCTATAATCTTAGAAACACC  
TTGAAGTATGCCAAGAAAAACGTCCGTGCATTTTGGAAGCTCAGAGCCAACCCACGCTTGGCCAATGCTACCAAG  
CGTCTTCTGACCACTGGCCAAGTCTCCTCCCGAGCCGCGTGAGGTGCAAAAAGGCCTTTGCGGGAACAACACTG  
GCGATGACCAAAAATGCTCGCGTGCTGGGAGGTGTGATGTCCGCCTTCTCCCTTGGCTATGACTTGGCCACTCTC  
TCAAAGGAATGGAAGCACCTGAAGGAAGGAGCAAGGACAAAGTTTGCGGAAGAGTTGAGAGCCAAGGCCTTGGAG  
CTGGAGAGGAACTCACAGAACTCACCCAGCTCTACAAGAGCTTGCAGCAGAAAGTGAGGTCAAGGGCCAGAGGG  
GTGGGGAAGGATTTAACTGGGACCTGCGAAACCGAGGCTTACTGGAAGGAGTTAAGGGAGCATGTGTGGATGTGG  
CTGTGGCTGTGTGTGTGTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
ATGGCCTTGGAGGTCCAAATAATATCAAGTACATCTTGGAGATGAGGGTGCCGTGCTTGGACAGACCTCGGCATG  
CCTTCTGTTTTCTCCTTCAATGCTCCTTAAGGCCTA TGTGCTGGGAAAAGGGTCTTCCCTGTTTGTGTGTGTGT  
GTTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
AAAAGAAGAAGAATACAGTCATGTATCTCTTGGTGACAGGGACGCATTCTGATAAATGTGTCTATTAGGCAATTGC  
ATTGTAGTGTGATTATCACAGATTGTACTTATACAAAACCTTAGATGGCATAGCCTACTGCATACCTAGGCTATAT  
GGGAGAGCCTATTGCTCCCAGGCTACGCACCTGTACAGCATGTGACTACTGAATACTATAGGCAATTGCAGCACA  
ATGGGAAATATTTGTGTATCTAAACATATGTAAACAGAGAAAAAGGAAAGTAAAAATATGGCATAAAAGATAAGA  
ATTGGCTCTCCTGTACAGGGCACTTACTACGAATGGAGCTTGCAGGGCTGAGAGTTGCTCCAGATGAGTCAGTGA  
GTGGTGAATGAATGTGAAGGCCTAGGGCATTACTGTATACTACTGTAGGCTTTATAAACACAGCACACTTAGGGT  
ACACAAAATGCATATTAAACATTTTCTTCCTTCAGTATATTAGGCAATAGGAATTTTCAAGTCCACTATAAAT  
CTTATCAAACCATGGTTGTATATGCAGTTGACCGAAACATTGTTATTGGACACATAACTATAGTTGAAAGAATAA  
GCAAAAAGTCTATCTAGGTGTGCTGTCTTGAGCAACTTTTAATTATTCTCCTGTCTGCAATATGAGTTAATCTT  
CTCTGATCGATGTAGATTCCAGGAAGGGGTGTCCAGGACAATTACCTTCCTTCTGGAGAAACTTCCCTTAATCAA  
ATAAGAGAACTTCAAAGAAAATCCCTCCCTGTGCTTTGGAAGGGAAGGGAGGTGGGCAGCAGTGGGTCAGAGATA  
GACCTTTGTCTCTTATTTCTGAGGCCCTTCAGTC TCCTTTATTCAAAGCACTCAGCATGCCAAAGCACCCCTATT  
TTAGGGTATCTTTTTCTGAGCCCTAAACACTGTGT TGGGGATGTCAACTGTGACAGGAAAATATCTTGGGGCCCC  
AGAATCACTAAGGAAAACCTCAAGCTTAGGGAAACT TCTTAGGGCAAACCCACCTCCCCTCTATTCAAAGTTATC  
TCTCTGCTCACTGAGATAGATACATATCTGATTGCCTCCTTTGGAAAGGCTAATCAGAAACTCAAAGAATGCAA  
CTGTTTGTGTCTCACCTATCTGTGACCTGGAAGCTCCCTCCCCACTGAACCAATGTTCTTCTTACATATATTGAT  
TAATGTCTTATGTCTCCCTAAAAATGTATAAAACCAAGGTATGCCCCAACCATCTTGGCCACATGTCTCAGGACT  
TCCTGAGTCTGTGTACAGTGTGTCTCAACCTTGGCAAAAATAAATTTCTAAATTAAGTACAGACAAAAA  
AAAAA

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**FIGURE 52**

MDNQAERESEAGVGLQRDEDDAPLCEDELQDGDLSPEEKIFLREFPRLKEDLKGNIDKLRLALADDIDKTHKKFT  
KANMVATSTAVISGVMSLLGLALAPATGGGSLLLS TAGQGLATAAGVTSIVSGTLERSKNKEAQARAEDILPTYD  
QEDREDEEEKADYVTAAGKIIYNLRNTLKYAKKNVRAFWKLRANPRLANATKRLTTGQVSSRSRVQVQKAFAGT  
TLAMTKNARVLGGVMSAFSLGYDLATLSKEWKHLKEGARTKFAEELRAKALELERKLTQLYKSLQQKVRRA  
RGVGKDLTGTCETEAYWKELREHVMMWLWLCVCLCVCVYVQFT

**FIGURE 53**

[illegible]

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**FIGURE 54**

MELSQMSELMGLSVLLGLLALMATAAVARGWLRAGEERSGRPACQKANGFPPDKSSGSKKQKQYQIRKEKPQQH  
NFTHRLLAAALKSHSGNISCMDFSSNGKYLATCADDRTIRIWSTKDFLQREHRSMRANVELDHATLVRFSPDCRA  
FIVWLANGDTLRVFKMTKREDGGYTFTATPEDFPKKHKAPVIDIGIANTGKFIMTASSDTTVLIWSLKGQVLSTI  
NTNQMNNTAAVSPCGRFVASCFTPDVKVWEVCFGKKGEFQEVVRAFELKGHSAAVHSFAFSNDSRRMASVSKD  
GTWKLWTDVEYKKKQDPYLLKTGRFEEAAGAAPCRLALSPNAQVLALASGSSIHLYNTRRGEKEECFERVHGEC  
IANLSFDITGRFLASCGDRAVRLFHNTPGHRAMVEEMQGHLKRASNESTRQRLQQQLTQAQETLKSLGALKK

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**FIGURE 55**

GGCACGAGGGGTAAGCGCTCTAGGGCGCTGCGCGGCGCAGCGAAAAATGGCGGCTTCCAGGTGGGCGCGCAAGGC  
CGTGGTCCTGCTTTGTGCTCTGACCTGCTGCTGCTGCTGCTACTGCTACCACCGCTGGGTCTGCGCGGCCGA  
AGGCTCGCCCGGGACGCGGACGAGTCTACCCACCTCCCCGGAAGAAGAAGGATATTGCGGATTACAATGA  
TGCAGACATGGCGCGTCTTCTGAGCAATGGGAGAAAGATGATGACATTGAAGAAGGAGATCTTCCAGAGCACAA  
GAGACCTTCAGCACCTGTCGACTTCTCAAAGATAGACCCAAGCAAGCCTGAAAGCATATTGAAAATGACGAAAAA  
AGGGAAGACTCTCATGATGTTTGTCACTGTATCAGGAAGCCCTACTGAGAAGGAGACAGAGGAAATTACGAGCCT  
CTGGCAGGGCAGCCTTTTCAATGCCAACTATGACGTCCAGAGGTTTATTGTGGGATCAGACCGTGCTATCTTCAT  
GCTTCGCGATGGGAGCTACGCCTGGGAGATCAAGGACTTTTGGTGGTCAAGACAGGTGTGCTGATGTAACCTCT  
GGAGGGCCAGGTGTACCCCGGCAAGGAGGAGGAAGCAAAGAGAAAAATAAAACAAAGCAAGACAAGGGCAAAAA  
AAAGAAGGAAGGAGATCTGAAATCTCGGTCTTCCAAGGAAGAAAAATCGAGCTGGGAATAAAAGAGAAGACCTGTG  
ATGGGGCAGCAGTGACGCGCTGTGGGGGGACAGGTGGACGTGGAGAGCTCTTTGCCAGCTCCTGGGGTGGGAGT  
GGTCTCAGGCAACTGCACACCGGATGACATTCTAGTGTCTTCTAGAAAGGGTCTGCCACATGACCAGTTTGTGGT  
CAAAGAATTACTGCTTAATAGGCTTCAAGTAAGAAGACAGATGTTTTCTAATTAATACTGGACACTGACAAATTC  
ATGTTTACTATAAAATCTCCTTACATGGAAATGTGACTGTGTTGCTTTTTCCCATTTACACTTGACCCCTGAGCC  
CCTTCCAGTGCTGCCTGAGGTGCCCTCTACCTGTGCCTGCCTCTCGTCTGCCAGTTTGATTTGGACCTGTTTTTC  
CCACCTCAGCCCCATGCTCTTGTCAAACGTGTTTGGCCTCCAGCCAAACAGGGCCTGGGAGGAAAAGAGAGTCC  
TGCTTCTGCCTGGCTTCCCCATCGGGGAGGGGAGTTGAAGTGACAGCCTCCTGACAGCTTAGAAATGTGGAGGAC  
GCAGCAAGTTCTGGACATGGCCAGCCATATGAATGATATCTTCTCTTTCTTTGAACCATCTCCACCTGCTCTTAT  
GGACACCCCGCCTTGGGGCAAGGCAAGGGATGGGCACAACCTTGAAGATTTTGGCTTTGTGATCCTCAGTGCCA  
GTGTACCCAGATGGGCCGGAAGCTGCCTTTGAAGCCAACGAATGCCATTTGCTCTGAAAAGCAATGATGAGTCT  
CTGAGCAAAAGCCCTATGAGAGGACGGCTGCCCCACCCCGTTCCATGGCTCCCCATCGCCAGCCCCCAGCCCC  
ACCAGGTACCGCTAGCCACACTGCACTGTGGCCCCCTTGGGAAGAGCTCTGTGCTCAGCTACTGATGGTGCCTGA  
CATGTGTTTGTATGGGGCAGGCAGGGTCTCACCTGAGCCTCACTGCCACCTAGGCAGGGTGATGGCTTTGTTGTA  
GACAGGGGAGCCATGCACAGCAGGAAATGGGGCAAACCTGTAAGGGAGGAGACCTCCTAGGAACCTGCCTACCTTC  
GAGCTGCCCTTAGGACAACCAGCAAGTCCCTGCCCTCTCTGAAGCCCAGTGTTCCCATCCATCAAATGATGGCA  
TTGATCTACAAGATCTCCTTCCCCACTCTATCACTCTGTGGCTCTAGAAAGAGTTCTGAGAGGTGAAGAAATCTG  
ACCAAGAGTGTGGAGTAAATGGTGCACCCAGATTAGAATCTAAACCCCTGAAACCCACACAGCACTCTCCATC  
TTGCAGTTCACAGCTTGAGCATCCGAGGGGCATGGGAATCCACGTCTATACTCAGCCCATCTTGGCAGGCAACAT  
GCATTTATCACCACCGGGAAAGTGCCATTCAACTTAGGTACCTTACATACATCAGCTTTTGGCAACCGGGATCT  
TAATTTAAAAGACAGAGGCTCCAAAATGATTCAGGACTGGGCTGGAAAGGATACTTCTCTTTTCTTATGTCCT  
CCTTTGGCTGGTTTGAAGGGTTTGCATTGCTTCTGATTTTTCTCATTGCCCCATATGATGGGTTTCTGATTTTGA  
TGTTTTCCATAGTGAGGATGGTGTATAACTAAGAAGCCAGCTTTGAGTTAGGAAGATTAGGATCCAAGTCCTAA  
CCTTAAGCAAGTGGCTTGGCTGTAAATCTTGGTGTCTCATCTTAAATGGAAATAATAGTACCTGCTGCACAG  
GTTATTAATGAGTAAGTGAGATAATTATAACATGTTGTGCAAAGTGCAAGGCTGAACATTGAATAGCAACCACAA  
TGATCATTATCATTATTGCCCGTGGAGCTTCTGCGGCCATACAGCCTCTCTGAGGACTCTCCCTGCACCTAG  
TTTTTGTGATGATAATGGGTGTGCTGACATGTCCCTCCTGGATGGCTTCTTCCAGCACAGCCAGCAAGCCTG  
TGCTAGGCTTACCACCGAAGCTGCCTGGCCTTGGACAAGCCATGTAGGTTCTCTGGGCTTTAGTTTTCTGGAAC  
AAATAAGAGTTTTGCAAGCTGCAAAGGACTGTACAAACGCTAGGCATCAGCTAGAATGTTGAAGAAGATGCAGGA  
CCCCTGGCCAGTCTGAATAGCAGGAATTGGGTAGGAGGGTGAGACTAAGCCACTTTTCTTATGATACTTTTGTG  
AATAAAGGGCCACTTTCCAAGCAAAAAAAAAAAAAAAAAAAAAA



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**FIGURE 56**

MAASRWARKAVVLLCASDLLLLLLLLPPPGSCAAEGSPGTPDESTPPPRKKKKDIRDYNDADMARLLEQWEKDDD  
IEEGDLPEHKRPSAPVDFSKIDPSKPESILKMTKKGKTLMMFVTVSGSPTEKETEEITSLWQGS LFNANYDVQRF  
IVGSDRAIFMLRDGSYAWEIKDFLVGQDRCADVTLEGQVYPGKGGGSKEKNKTKQDKGKKKKEGDLKSRSSKEEN  
RAGNKREDL

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**FIGURE 57**

GGCACGAGGCGGAGTCTACGGAAGCCGTTTTTCGCTTCACTTTTCTGGCTGTAGAGCGCTTTCCCCCTGGCGGGT  
GAGAGTGCAGAGACGAAGGTGCGAGATGAGCACTATGTTTCGCGGACACTCTCCTCATCGTTTTTATCTCTGTGTG  
CACGGCTCTGCTCGCAGAGGGCATAACCTGGGTCTTGGTTTACAGGACAGACAAGTACAAGAGACTGAAGGCAGA  
AGTGGAAAAACAGAGTAAAAAATTGGAAAAGAAGAAGGAAACAATAACAGAGTCAGCTGGTCGACAACAGAAAAA  
GAAATAGAGAGACAAGAAGAGAACTGAAGAATAACAACAGAGATCTATCAATGGTTCGAATGAAATCCATGTT  
TGCTATTGGCTTTTGTTTTACTGCCCTAATGGGAATGTTCAATTCCATATTTGATGGTAGAGTGGTGGCAAAGCT  
TCCTTTTACCCCTCTTTCTTACATCCAAGGACTGTCTCATCGAAATCTGCTGGGAGATGACACCACAGACTGTTT  
CTTCATTTTCTGTATATTCTCTGTACTATGTCGATTTCGACAGAACATTCAGAAGATTCTCGGCCTTGCCCTTC  
ACGAGCCGCCACCAAGCAGGCAGGTGGATTTCTTGGCCACCACCTCCTTCTGGGAAGTTCTCTTGAAGTCAAGA  
ACTCTTTATTTTCTATCATTCTTTCTAGACACACACATCAGACTGGCAACTGTTTTGTAGCAAGAGCCATAGG  
TAGCCTTACTACTTGGGCCTCTTTCTAGTTTTGAATTATTTTTAAGCCTTTTGGGTATGATTAGAGTGAAAATGG  
CAGCCAGCAAACCTTGATAGTGCTTTTGGTCCTAGATGATTTTTATCAAATAAGTGGATTGATTAGTTAAGTTTCTAG  
GTAATGTTTTATGTAATGAAAAACAAATAGCATCCTTCTTGTTCATTTACATAAGTATTTTCTGTGGGACCGACT  
CTCAAGGCACTGTGTATGCCCTGCAAGTTGGCTGTCTATGAGCATTTAGAGATTTAGAAGAAAAATTTAGTTTGT  
TTAACCCTTGTAAGTGTGTTTTGTTGTTGTTTTTTTTTCAAGCCAAATACATGACATAAGATCAATAAAGAGG  
CCAAATTTTGTAGCTGTTTTATGTACAAGGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 58**

MSTMFADTLLIVFISVCTALLAEGITWVLVYRTDKYKRLKAEVEKQSKKLEKKKETITESAGRQKKKKIERQEEK  
LKNNNRDLSMVRMKSMFAIGFCFTALMGMFNSIFDGRVVAKLPFTPLSYIQGLSHRNLLGDDTTDCSFIFLYILC  
TMSIRQNIQKILGLAPSRATKQAGGFLGPPPPSGKFS

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**FIGURE 59**

GTTCGCCGCCGCCGCCGCCGCCACCTGGAGTTTTTTCAGACTCCAGATTTCCCTGTCAACCACGAGGAGTCCAGA  
GAGGAAACGCGGAGCGGAGACAACAGTACCTGACGCCTCTTTCAGCCCGGGATCGCCCCAGCAGGGATGCGCGAC  
AAGATCTGGCTGCCCTTCCCGTGCTCCTTCTGGCCGCTCTGCCTCCGGTGCTGCTGCCTGGGGCGGCCGGCTTC  
ACACCTTCCCTCGATAGCGACTTCACCTTTACCCTTCCCGCCGCCGAGAAAGGAGTGCTTCTACCAGCCCATGCCC  
CTGAAGGCCTCGCTGGAGATCGAGTACCAAGTTTTAGATGGAGCAGGATTAGATATTGATTTCCATCTTGCTCT  
CCAGAAGGCAAAACCTTAGTTTTTGAACAAAGAAAATCAGATGGAGTTCACACTGTAGAGACTGAAGTTGGTGAT  
TACATGTTCTGCTTTGACAATACATTTCAGCACCATTCTGAGAAGGTGATTTTCTTTGAATTAATCCTGGATAAT  
ATGGGAGAACAGGCACAAGAACAAGAAGATTGGAAGAAATATATTACTGGCACAGATATATTGGATATGAACTG  
GAAGACATCCTGGAATCCATCAACAGCATCAAGTCCAGACTAAGCAAAAGTGGGCACATACAACTCTGCTTAGA  
GCATTTGAAGCTCGTGATCGAAACATACAAGAAAGCAACTTTGATAGAGTCAATTTCTGGTCTATGGTTAATTTA  
GTGGTCATGGTGGTGGTGTGTCAGCCATTCAAGTTTATATGCTGAAGAGTCTGTTTGAAGATAAGAGGAAAAGTAGA  
ACTTAAACTCCAACTAGAGTACGTAACATTGAAAAATGAGGCATAAAATGCAATAAACTGTTACAGTCAAGA  
CCATTAATGGTCTTCTCCAAATATTTTGAGATATAAAAGTAGGAAACAGGTATAATTTTAAATGTGAAAATTAAG  
TCTTCACTTTCTGTGCAAGTAATCCTGCTGATCCAGTTGTACTTAAGTGTGTAACAGGAATATTTTGCAGAAATAT  
AGGTTTAACTGAATGAAGCCATATTAATAACTGCATTTTCCTAACTTTGAAAAATTTTGCAATGTCTTAGGTGA  
TTTAAATAAATGAGTATTGGGCCTAAA

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**FIGURE 60**

MGDKIWLPFPVLLLAALPPVLLPGAAGFTPSLDSDFTFILPAGQKECFYQPMPLKASLEIEYQVLDGAGLDIDFH  
LASPEGKTLVFEQRKSDGVHTVETEVGDYMFCDNTFSTISEKVIFFELILDNMGEQAQEQEDWKKYITGTDILD  
MKLEDILESINSIKSRLSKSGHIQTLLRAFEARDRNIQESNFDVNFWSMVNLVVMVVSAIQVYMLKSLFEDKR  
KSRT

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**FIGURE 61**

AACTGATCGCGGCCTAGTCCCGACGCGTGTGTGCTAGTGAGCCGGAGCCGGCGACGGCGGCAGTGGCGGCCCGGC  
CTGCAGGAGCCCGACGGGGTCTCTGCCATGGGGGAGTGACGCGCCTGCACCCGCTGTTCCGCGGCAGCGGCGAGA  
CATGAGGAGACCCCGCGACAGGGGACGCGCGCGGCTCGTGAGCCCGGGATGGAGGAGAAATACGGCGGGGAC  
GTGCTGGCCGGCCCCGGCGGGCGGGCGGCCCTTGGGCCGGTGGACGTACCCAGCGCTCGATTAACAAAAATATATT  
GTGTTACTATGTTTCACTAAATTTTTGAAGGCTGTGGGACTTTTCAATCATATGATCTCCTAAAAGCTGTTTAC  
ATTGTTCA~~G~~TTCATTTTTATATTAAACTTGGGACTGCATTTTTTATGGTTTTGTTTCAAAGCCATTTTCTTCT  
GGGAAACTATTACCAAACACCAGTGGATCAAAATATTAAACATGCAGTTGCTGGGTGTATTATTTCACTCTTG  
TGGTTTTTTGGCCTCACTCTTTGTGGACCACTAAGGACTTTGCTGCTATTTGAGCACAGTGATATTGTTGTCATT  
TCACTACTCAGTGTTTTGTTCACCAGTTCTGGAGGAGGACCAGCAAAGACAAGGGGAGCTGCTTTTTTCATTATT  
GCTGTGATCTGTTTATTGCTTTTTGACAATGATGATCTC~~ATGG~~CTAAAATGGCTGAACACCCTGAAGGACATCAT  
GACAGTGTCTAACTCATATGCTTTACACAGCCATTGCCTTCTTAGGTGTGGCAGATCACAAGGGTGGAGTATTA  
TTGCTAGTACTGGCTTTGTGTTGTAAAGTTGGTTTTCATACAGCTTCCAGAAAGCTCTCTGTGCGACGTTGGTGG  
GCTAAACGTCTTCAAGCTTTATCTCATCTTGTTTCGTGCTTCTCTTGTGCCCATGGGTCAATTGTTCTTTCTGTG  
ACAACTGAGAGTAAAGTGGAGTCTTGGTTTTCTCTCATTATGCCTTTTGCAACGGTTATCTTTTTTGTGTCATGATC  
CTGGATTTCTACGTGGATTCCATTTGTTTCACTCAAAAATGGAAGTTTCCAAATGTGCTCGTTATGGATCCTTTCCC  
ATTTTTATTAGTGCTCTCCTTTTTTGAAATTTTTGGACACATCCAATAACAGACCAGCTTCGGGCTATGAACAAA  
GCAGCACACCAGGAGAGCACTGAACACGTCTCTGCTGGAGGAGTGGTAGTGAGTGCTATATTCTTCATTTTGTCT  
GCCAATATCTTATCATCTCCCTCTAAGAGAGGACAAAAAGGTACCCTTATTGGATATTCTCCTGAAGGAACACCT  
CTTTATAACTTCATGGGTGATGCTTTTTCAGCATAGCTCTCAATCGATCCCTAGGTTTATTAAGGAATCACTAAAA  
CAAATTCCTTGAGGAGAGTGACTCTAGGCAGATCTTTTACTTCTTGTGCTTGAATCTGCTTTTTTACCTTTGTGGAA  
TTATTCTATGGCGTGCTGACCAATAGTCTGGGCCTGATCTCGGATGGATTCCACATGCTTTTTGACTGCTCTGCT  
TTAGTCATGGGACTTTTTTGTGCTGCCCTGATGAGTAGGTGGAAAGCCACTCGGATTTTCTCCTATGGGTACGGCCGA  
ATAGAAATTCGTCTGGATTATTAATGGACTTTTTCTAATAGTAATAGCGTTTTTTGTGTTTATGGAGTCAGTG  
GCTAGATTGATTGATCCTCCAGAATTAGACTCACATGTTAACACCAGTCTCAGTTGGAGGGCTGATAGTAAAC  
CTTATTGGTAICTGTGCCCTTAGCCATGCCATAGCCATGCCATGGAGCTTCTCAAGGAAGCTGTCACATCATCT  
GATCACAGCCATTACACCATATGCATGGACACAGTGACCATGGGCATGGTCACAGCCACGGATCTGCGGGTGG  
GGCATGAATGCTAACATGAGGGGTGTATTTCTACATGTTTTGGCAGATACTCTTGGCAGCATTGGTGTGATCGTA  
TCCACAGTTCTTATAGAGCAGTTTGGATGGTTCATCGCTGACCCACTCTGTTCTCTTTTTATTGCTATATTAATA  
TTTCTCAGTGTTGTTCCACTGATTAAAGATGCCTGCCAGGTTCTACTCCTGAGATTGCCACCAGAATATGAAAA  
GAACATACATATTGCTTTAGAAAAGATACAGAAAATGAAGGATTAATATCATACCGAGACCCTCATTTTTGGCGT  
CATTCTGCTAGTATTGTGGCAGGAACAATTCATATACAGGTGACATCTGATGTGCTAGAACAAAGAATAGTACAG  
CAGGTTACAGGAATACTTAAAGATGCTGGAGTAAACAATTTAACAATTCAGTGGAAAAGGAGGCATACTTTCAA  
CATATGTCTGGCCTAAGTACTGGATTTTATGATGTTCTGGCTATGACAAAACAAATGGAATCCATGAAATACTGC  
AAAGATGGTACTTACATCATG~~TG~~AGATAACTCAAGAATTACCCCTGGAGAATAAACAATGAAGATTAAATGACTC  
AGTATTTGTAATATTGCCAGAAGGATAAAAATTACACATTAAGTGTACAGAAACAGAGTTCCCTACTACTGGATC  
AAGGAATCTTTCTTGAAGGAAATTTAAATACAGAAATGAACATTAATGGTAAAAGTGGAGTAATTATTTAAATTA  
TGTGTATAAAAGGAATCAAATTTTGAGTAAACATGATGTATTACATCATCTTCGAAAATAGATATGATGGATTCT  
AGTGAAGACCAAATTAATTCTGTTTACTTTCTATCAGGAAGCATCTCCATTGTAAATATGATTTACATGTTTA  
TTACAAAGACCCAAATGAAAAATTTTTAGTCCATTTTTGCATAGCCTAAAGATAAAATAGGAATAAAAGTTCTA  
TATTTATGGAAAAA

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**FIGURE 62**

MAKMAEHPEGHDSAL THMLYTAIAFLGVADHKGGVLLLV LALCCKVGFHTASRKLSVDVGGAKRLQALSHLVSV  
LLLCPWVIVLSVTTESKVESWFSLIMPFATVIFFVMILDFYVDSICSVKMEVSKCARYGSFFIFISALLFGNFWT  
HPITDQLRAMNKAAHQESTEHLVLSGGVVVSAIFFILSANILSSPSKRGQKGTIGYSPEGTPLYNFMGDAFQHSS  
QSIPRFIKESLKQILEESDSRQIFYFLCLNLLFTFVELFYGVLTNSLGLISDGFHMLFDCSALVMGLFAALMSRW  
KATRIFSYGYGRIEILSGFINGLFLIVIAFFVFME SVARLIDPPELDTHMLTPVSVGGGLIVNLIGICAF SHAHSH  
AHGASQGSCHSSDHS SHHMHGSDHGHGSHSGSAGGGMNANMRGVFLHVLADTLGSIGVIVSTVLIEQFGWFIA  
DPLCSLFIAILIFLSVVPLIKDACQVLLRLPPEYEKELHIALEKIQKIEGLISYRDPHFWRHSASIVAGTIHIQ  
VTSDVLEQRIVQQVTGILKDAGVNNLTIQVEKEAYFQHMSGLSTGFHDVLAMTKQMESMKYCKDGTYIM

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**FIGURE 63**

GGGGCGAGACCTACGACGCCGGCGAGCAGTGGCCGTTACGCCTAAAAAGATGGCGGTCTTGGCACCTCTAATTGC  
TCTCGTGTATTCCGGTGCCGCGACTTTACGATGGCTCGCCCAACCTTACTACCTTCTGTGCGCCCTGCTCTCTGC  
TGCCCTTCTACTCGTGAGGAAACTGCCGCCGCTCTGCCACGGTCTGCCACCCAACGCGAAGACGGTAACCCGTG  
TGACTTTGACTGGAGAGAAGTGGAGATCCTGATGTTTCTCAGTGCCATTGTGATGATGAAGAACCGCAGATCCAT  
CACTGTGGAGCAACATATAGGCAACATTTTCATGTTAGTAAAGTGGCCAACACAATTCTTTTCTCCGCTTGGG  
TATTCGCATGGGCCTACTTTACATCACACTCTGCATAGTGTTCTGATGACGTGCAAACCCCCCTATATATGGG  
CCCTGAGTATATCAAGTACTTCAATGATAAAACCATTGATGAGGAAGTAGAACGGGACAAGAGGGTCACTTGGAT  
TGTGGAGTTCTTTGCCAATTGGTCTAATGACTGCCAATCATTTGCCCTATCTATGCTGACCTCTCCCTTAAATA  
CAACTGTACAGGGCTAAATTTTGGGAAGGTGGATGTTGGACGCTATACTGATGTTAGTACGCGGTACAAAGTGAG  
CACATCACCCCTCACCAAGCAACTCCCTACCCTGATCCTGTTCCAAGGTGGCAAGGAGGCAATGCGGCGGCCACA  
GATTGACAAGAAAGGACGGGCTGTCTCATGGACCTTCTCTGAGGAGAATGTGATCCGAGAATTTAACTTAAATGA  
GCTATACCAGCGGGCCAAGAACTATCAAAGGCTGGAGACAATATCCCTGAGGAGCAGCCTGTGGCTTCAACCCC  
CACCACAGTGTGAGATGGGGAAAACAAGAAGGATAAAATAGATCCTCACTTTGGCAGTGCTTCTCTCTCTGTCAA  
TTCCAGGCTCTTTCCATAACCACAAGCCTGAGGTGCAGCTTTTATTTATGTTTTCCCTTTGGCTGTGACTGGGTG  
GGGCAGCATGCAGCTTCTGATTTTAAAGAGGCATCTAGGGAATTGTCAGGCACCCTACAGGAAGGCCTGCCATGC  
TTGTGGCCAAGTGTTCCTGAGGCAAGAAAGAGATCTCATAGGACGGAGGGGGAAAATGGTTTTCCCTCCAAG  
CTTGGGTCAGTGTGTTAACTGCTTATCAGCTATTCAGACATCTCCATGGTTTCTCCATGAACTCTGTGGTTTCA  
TCATTCCTTCTTAGTTGACCTGCACAGCTTGGTTAGACCTAGATTTAACCCTAAGGTAAGATGCTGGGGTATAGA  
ACGCTAAGAATTTTCCCCAAGGACTCTTGCTTCTCAAGCCCTTCTGGCTTCGTTTATGGTCTTCATTAAAAAGT  
ATAAGCCTAACTTTGTCGCTAGTCCTAAGGAGAAACCTTTAACCACAAAGTTTTTATCATTGAAGACAATATTGA  
ACAACCCCTATTTTGTGGGGATTGAGAAGGGGTGAATAGAGGCTTGAGACTTTTCTTTGTGTGGTAGGACTTGG  
AGGAGAAATCCCTGGACTTTTACTAACCCTCTGACATACTCCCCACACCCAGTTGATGGCTTTCCGTAATAAAA  
AGATTGGGATTTTCCTTTTG



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**FIGURE 64**

MAVLAPLIALVYSVPRLSRWLAQPYLLSALLSAAFLVRKLPPLCHGLPTQREDGNPCDFDWREVEILMFLSAI  
VMMKNRRSITVEQHIGNIFMFSKVANTILFFRLDIRMGLLYITLCIVFLMTCKPPLYMGPEYIKYFNDKTIDEEL  
ERDKRVTWIVEFFANWSNDCQSFAPIYADLSLKYNCTGLNFGKVDVGRYTDVSTRYKVSTSPLTKQLPTLILFQG  
GKEAMRRPQIDKKGRAVSWTFSEENVIREFNLNELYQRAKKLSKAGDNIPEEQPVASTPTTVSDGENKKDK

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**FIGURE 65**

TGCAGTCTGTCTGAGGGCGGCCGAAGTGGCTGGCTCATTTAAGATGAGGCTTCTGCTGCTTCTCCTAGTGGCGGC  
GTCTGCGATGGTCCGGAGCGAGGCCTCGGCCAATCTGGGCGGCGTGCCAGCAAGAGATTAAAGATGCAGTACGCC  
ACGGGGCCGCTGCTCAAGTTCAGATTTGTGTTTCCTGAGGTTATAGGCGGGTGTTTGAGGAGTACATGCGGGTT  
ATTAGCCAGCGGTACCCAGACATCCGCATTGAAGGAGAGAATTACCTCCCTCAACCAATATATAGACACATAGCA  
TCTTTCTGTGCTAGTCTTCAAACCTAGTATTAATAGGCTTAATAATTGTTGGCAAGGATCCTTTTGCTTTCTTTGGC  
ATGCAAGCTCCTAGCATCTGGCAGTGGGGCCAAGAAAATAAGGTTTATGCATGTATGATGGTTTTCTTCTTGAGC  
AACATGATTGAGAACCAGTGTATGTCAACAGGTGCATTTGAGATAACTTTAAATGATGTACCTGTGTGGTCTAAG  
CTGGAATCTGGTCACCTTCCATCCATGCAACAACCTTGTTCAAATTCTTGACAATGAAATGAAGCTCAATGTGCAT  
ATGGATTCAATCCACACCATCGATCATAGCACCACTATCAGCACTGAAAACCTCTTTTGCAATTAAGGGATCATT  
GCAAGAGCAGCGTGACTGACATTATGAAGGCCTGTACTGAAGACAGCAAGCTGTTAGTACAGACCAGATGCTTTC  
TTGGCAGGCTCGTTGTACCTCTTGGAACCTCAATGCAAGATAGTGTTTCAGTGCTGGCATATTTTGGAATTCT  
GCACATTGAGAGTGCAATAATACTGTATAGCTTTCCCCACCTCCCACAAAATCACCCAGTTAATGTGTGTGT  
GTGTGTTTTTTTTTAAGGTAAACATTACTTGTAACTTTTTTTCTTTAGTCATATTGGAAAAAGTAGAAAATT  
GGAGTTACATTTGGATTTTTTTTCCAA

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**FIGURE 66**

MQYATGPLLKFQICVSXGYRRVFEEYMRVISQRYPDIRIEGENYLPQPIYRHIASFLSVFKLVLIIGLIIVGKDPF  
AFFGMQAPSIWQWGQENKVYACMMVFFLSNMIENQCMSTGAFEITLNDVPVWSKLESGHLPSMQQLVQILDNEMK  
LNVHMDSIPHRS

[illegible]

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**FIGURE 68**

MEEGGGGVRSIVPGGPVLLVLCGLLEASGGGRALPQLSDDIPFRVNWPGTEFSLPTTGVLKEDNYVIMTTAHKE  
KYKCILPLVTSGDEEEEKDYKGPNPRELLEPLFKQSSCSYRIESYWTYEVCHGKHIRQYHEEKETGQKINIHEYY  
LGNMLAKNLLFEKEREAEKEKSNEIPTKNIEGQMTPIYPVGMGNGTPCSLKQNRPRSSTVMYICHPEKHEILS  
VAEVTTCYEVVILTPLLCSHPKYRFRASPVNDIFCQSLPGSPFKPLTLRQLEQQEEILRVPFRRNKEEDLQSTK  
EERFFPAIHKSIAIGSQPVLTVGTTTHISKLTDQDLIKEFLSGSYCFRGGVGWWKYEF CYGKHVHQYHEDKDSGKTS  
VVVG TWNQEEHIEWAKKNTARAYHLQDDGTQTVRMVSHFYGNCDICDITDKPRQVTVKLKCKESDSPHAVTVYML  
EPHSCQYILGVESPVICKILDTADENGLLSLPN

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**FIGURE 69**

AACAATAGGAAACGTCAAATTTGGGATAGTCGGCAGTTCTGGCCCCCTGCAGCTGGAGGTACCCTGAGTTCTGAGG  
GTCGTAGTGCTGTTTTCTGGTATTCTCATCGCGGTACCTCTACCGGTGTGGACAAAGTAAAGTTTGAATCAGCTTC  
TCCATGGCCTGGGCACCAGTTCCCGGCTGAGCCATTTTCCTTTTGGCTAAAAGTCCCCGCCAGAGGCCAATTCG  
TCGCGGCGGGCGGTGGAGATCGCAGGTGCTCAGGCTTGCAATGGGTCAAGGGTTGTGGAGAGTGGTCAGAAACC  
AGCAGCTGCAACAAGAAGGCTACAGTGAGCAAGGCTACCTCACCAGAGAGCAGAGCAGGAGAATGGCTGCGAGCA  
ACATTTCTAACACCAATCATCGTAAACAAGTCCAAGGAGGCATTGACATATATCATCTTTTGAAGGCAAGGAAAT  
CGAAAGAACAGGAAGGATTCATTAATTTGGAAATGTTGCCTCCTGAGCTAAGCTTTACCATCTTGTCTACCTGA  
ATGCAACTGACCTTTGCTTGGCTTCATGTGTTTGGCAGGACCTTGCGAATGATGAACTTCTCTGGCAAGGGTTGT  
GCAATCCACTTGGGGTCACTGGTCCATATACAATAAGAACCCACCTTTAGGATTTCTTTTAGAAAAGTGTATA  
TGCAGCTGGATGAAGGCAGCCTCACCTTTAATGCCAACCAGATGAGGGAGTGAACCTACTTTATGTCCAAGGGTA  
TCCTGGATGATTGCGCAAAGGAAATAGCAAAGTTTATCTTCTGTACAAGAACTAAATTTGGAAGAACTGAGAA  
TCTATCTTGATGAAGGAGAGATGTCTTGATGACCTTGTAACATTGCATAATTTTAGAAATCAGTTCTTGCCAA  
ATGCACTGAGAGAATTTTTTCGTCATATCCATGCCCTGAAGAGCGTGGAGAGTATCTTGAACTCTTATAACAA  
AGTTCTCACATAGATTCTGTGCTTGCAACCCTGATTTAATGCGAGAAGTTGGCCTTAGTCCTGATGCTGTCTATG  
TACTGTGCTACTCTTTGATTCTACTTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATGTCAAAAAGGG  
AATTTATTCGAAATACCCGTCGCGCTGCTCAAATATTAGTGAAGATTTTGTAGGGCATCTTTATGACAATATCT  
ACCTTATTGGCCATGTGGCTGCA**TAAAA**AGCACAATTGCTAGGACTTCAGTTTTTACTTCAGACTAAAGCTACCC  
AAGGACTTAGCAGATATGGGGGTACATCAGTGCTGGTCATTGTAGCCTGAGTATACAATCAAGCTTCAGTGTGC  
AACCTTTTTTTCTTTTGCCATTTTCTATTTTAGTAATTTCTTGGGGAAGTAAATAATTTTGCAGAATTTTTCT  
AATTTGTTTATCACGTTTTTGACAAAGCAGAGCCACTGTCTAACACAGCTGTTAACGAATGATAAACTGACATT  
ATACTCTAAAAGATGGTGTATTTGTGCATTAGATTGCCTGAAAACTTTATCCATTTCATTCTTTATACAAAT  
ACCATGTAATGTGTACATATTTAACTAAAGAGATTATAGTCATAATTATTTTATTGTAAAGATTTTAACTAAAG  
TTTTTCCTTTTCTCTCAAAGTGAATTTGAAATTTATTTGATTCTGATCTGAACTATTGTCTTCGTAAAAGTTA  
GATCTGACTTCAGACAGAAACCAATACCAGCTTCCTTTTCTTTAACTTTGAAGAGTGTGATTGTGTTACTATA  
TTACTATGCAAACTGGCAGTTATTTTATAATAIAAATTTATAATTTGATTTTTTATTTTAAAACTGGGTAA  
TCAAGTCTCGGTAAGTCCTTTAAACCATTAGGATTTTAAACATCAAAATTTATGATTTACATTTCATAGGAAT  
AAAATAAAATATTATTAGAAGTCTGGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 70**

MGQGLWRVVRNQQLQQEGYSEQGYLTREQSRRMAASNISNTNHRKQVQGGIDYHLLKARKSKEQEGFINLEMLP  
PELSFTILSYLNATDLCLASCWQDLANDELLWQGLCKSTWGHWSIYNKNPPLGFSFRKVYMQLDEGSLTFNANP  
DEGVNYFMASKGILDDSPKEIAKFIFCTRILNWKKLRIYLDERRDVLDDLVTLHNFRNQFLPNALREFFRHHAPE  
ERGEYLETLITKFSHRFCACNPDLRELGLSPDAVYVLCYSLILLSIDLTSPHVKNKMSKREFIRNTRRAAQNIS  
EDFVGHLVDNIYLIGHVAA

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**FIGURE 71**

TGAGAGTCCTCTAGACAGGCGCTCCTCGCAGCACCGTAGTGCGCTTGCGCTGAGCAGCCCGCGAGGGCGGAAGTG  
GGAGCTGCGACCGCGCTCCCTGTGAGGTGGGCAAGCGGCGAAATCGCGCCCTCCGGGAGTCTTGCAAGTTCCCTG  
GCAGTCCTGGTGCTGTTGCTTTGGGGTGCTCCCTGGACGCACGGGCGGCGGAGCAACGTTTCGCGTCATCACGGAC  
GAGAACTGGAGAGAACTGCTGGAAGGAGACTGGATGATAGAATTTTATGCCCGTGCGTGCCTGCTTGTCAAAAT  
CTTCAACCGGAATGGGAAAGTTTTGCTGAATGGGGAGAAGATCTTGAGGTTAATATTGCGAAAGTAGATGTCACA  
GAGCAGCCAGGACTGAGTGGACGGTTTATCATAACTGCTCTTCTACTATTTATCATTGTAAAGATGGTGAATTT  
AGGCGCTATCAGGGTCCAAGGACTAAGAAGGACTTCATAAACTTTATAAGTGATAAAGAGTGGAAGAGTATTGAG  
CCCGTTTCATCATGGTTTGGTCCAGGTTCTGTTCTGATGAGTAGTATGTCAGCACTCTTTCAGCTATCTATGTGG  
ATCAGGACTTGCCATAACTACTTTATTGAAGACCTTGGATTGCCAGTGTGGGGATCATATACTGTTTTTGCTTTA  
GCAACTCTGTTTTCCGGACTGTTATTAGGACTCTGTATGATATTTGTGGCAGATTGCCTTTGTCCTTCAAAAAGG  
CGCAGACCACAGCCGTACCCATACCCTTCAAAAAAATTATTATCAGAATCTGCACAACCTTTGAAAAAAGTGAG  
GAGGAACAAGAGGCGGATGAAGAAGATGTTTCAGAAGAAGAAGCTGAAAGTAAAGAAGGAACAAACAAAGACTTT  
CCACAGAATGCCATAAGACAACGCTCTCTGGGTCCATCATTGGCCACAGATAAATCCTAGTTAAATTTTATAGTT  
ATCTTAATATTATGATTTTGATAAAAACAGAAGATTGATCATTTTGTGTTTGAAGTGAAGTGTGACTTTTTT  
GAATATTGCAGGGTTCAGTCTAGATTGTCATTAAATTGAAGAGTCTACATTCAGAACATAAA



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**FIGURE 72**

MAPSGSLAVPLAVLVLLLWGAPWTHGRRSNVRVITDENWRELLEGDWMIEFYAPWCPACQNLQPEWESFAEWGED  
LEVNIAKVDVTEQPGLSGRFIITALPTIYHCKDGEFRRYQGPRKKDFINFISDKEWKSIEPVSSWFGPGSVLMS  
SMSALFQLSMWIRTCHNYFIEDLGLPVWGSYTVFALATLFSGLLLGLCMIFVADCLCPSKRRRPQYPYPYPSKKLL  
SESAQPLKKVEEEQEAEDEEDVSEEEAESKEGTNKDFPQNAIRQRS LGPSLATDKS

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**FIGURE 73**

GCGGCGGCGGCAGCGGCGGCGACGGCGACATCGGAGAGCGGGGCCTACGGCGCGGCCAAGGCGGGCGGCTCCTTCG  
ACCTGCGGCGCTTCCTGACGCAGCCGCAGGTGGTGCGCGCGCCGTGTGCTTGGTCTTCGCCTTGATCGTGTTCT  
CCTGCATCTATGGTGAGGGCTACAGCAATGCCCACGAGTCTAAGCAGATGTACTGCGTGTTCAACCGCAACGAGG  
ATGCCGTGCCGCTATGGCAGTGCCATCGGGGTGCTGGCCTTCCTGGCCTCGGCTTTCTTCTTGGTGGTCGACGCGT  
ATTTCCTTGTGGTTTGTGGTTTCTGCTTCCTCACCAACCAGTGGGCAGTCACCAACCCGAAGGACGTGCTGGTGG  
GGGCGACTCTGTGAGGGCAGCCATCACCTTCAGCTTCTTTTCCATCTTCTCCTGGGGTGTGCTGGCCTCCCTGG  
CCTACCAGCGCTACAAGGCTGGCGTGGACGACTTCATCCAGAATTACGTTGACCCCACTCCGGACCCCAACTG  
CCTACGCCTCCTACCCAGGTGCATCTGTGGACAAC TACCAACAGCCACCCTTCACCCAGAACGCGGAGACCACCG  
AGGGCTACCAGCCGCCCCCTGTGTACTTGAGCGGCGGTTAGCGTGGGAAGGGGGACAGAGAGGGCCCTCCCCTCTG  
CCCTGGACTTTCCCATGAGCCTCCTGGAAGTGCAGCCCTCTCTTTACCTGTTCCATCCTGTGCAGCTGACAC  
ACAGCTAAGGAGCCTCATAGCCTGGCGGGGGCTGGCAGAGCCACACCCCAAGTGCCGTGTGCCCAGAGGGCTTCAG  
TCAGCCGCTCACTCCTCCAGGGCACTTTTAGGAAAGGGTTTTTAGCTAGTGTTTTCTCGCTTTTAATGACCTC  
AGCCCCGCCTGCAGTGGCTAGAAGCCAGCAGGTGCCCATGTGCTACTGACAAGTGCCTCAGCTTCCCCCGGGCC  
GGGTCAGGCCGTGGGAGCCGCTATTATCTGCGTTCTCTGCCAAAGACTCGTGGGGGCCATCACACCTGCCCTGTG  
CAGCGGAGCCGGACCAGGCTCTTGTGTCCTCACTCAGGTTTGCTTCCCCTGTGCCCAGTGTGTATGATCTGGGG  
GCCACCACCCTGTGCCGTGGCCTCTGGGCTGCCTCCCGTGGTGTGAGGGCGGGGCTGGTGTCTATGGCACTTCC  
TCCTTGCTCCCACCCCTGGCAGCAGGAAGGGCTTTGCCTGACAACACCCAGCTTTATGTAAATATTCTGCAGTT  
GTTACTTAGGAAGCCTGGGAGGGCAGGGGTGCCCCATGGCTCCCAGACTCTGTCTGTGCCGAGTGATTATAAA  
ATCGTGGGGGAGATGCCCCGCCTGGGATGCTGTTTGGAGACGGAATAAATGTTTTCTCATTAGTA

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**FIGURE 74**

MESGAYGAAGGSFDLRRFLTQPQVVARAVCLVFALIVFSCIYGEYSNAHESKQMYCVFNRNEDACRYGSAIG  
VLAFLASAFFLVVDAYFPQISNATDRKYLFIGDLLFSALWTFWLVGFCELTNQWAVTNPKDVLVGADSVRAAIT  
FSFFSIFSWGVLASLAYQRYKAGVDDFIQNYVDPTPDPNTAYASYPGASVDNYQQPPFTQNAETTEGYQPPPVY

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**FIGURE 75**

CAGAGCTGCTGTCATGGCGGCCGCTCTGTGGGGCTTCTTTCCCGTCCTGCTGCTGCTGCTGCTATCGGGGGATGT  
CCAGAGCTCGGAGGTGCCCCGGGGCTGCTGCTGAGGGATCGGGAGGGAGTGGGGTCGGCATAGGAGATCGCTTCAA  
GATTGAGGGGCGTGCA GTTGTTCAGGGGTGAAGCCTCAGGACTGGATCTCGGCGGCCCGAGTGTGGTAGACGG  
AGAAGAGCACGTCCGTTTCCTTAAGACAGATGGGAGTTTTGTGGTTCATGATATACCTTCTGGATCTTATGTAGT  
GGAAGTTGTATCTCCAGCTTACAGATTTGATCCCGTTTCGAGTGGATATCACTTCGAAAGGAAAAATGAGAGCAAG  
ATATGTGAATTACATCAAAACATCAGAGGTTGTCAGACTGCCCTATCCTCTCCAAATGAAATCTTCAGGTCCACC  
TTCTTACTTTATTAAAAAGGGAATCGTGGGGCTGGACAGACTTTCTAATGAACCCAATGGTTATGATGATGGTTCT  
TCCTTTATTGATATTTGTGCTTCTGCCTAAAGTGGTCAACACAAGTGATCCTGACATGAGACGGGAAATGGAGCA  
GTCAATGAATATGCTGAATTCCAACCATGAGTTGCCTGATGTTTCTGAGTTCATGACAAGACTCTTCTTTCAAA  
ATCATCTGGCAAATCTAGCAGCGGCAGCAGTAAAACAGGCAAAAAGTGGGGCTGGCAAAGGAGGTAGTCAGGCCG  
TCCAGAGCTGGCATTTCACAAACACGGCAACACTGGGTGGCATCCAAGTCTTGGAACCGTGTGAAGCAACTA  
CTATAAACTTGAGTCATCCCGACGTTGATCTCTTACAACACTGTGTATGTAACTTTTTAGCACATGTTTTGTACTT  
GGTACACGAGAAAAACCCAGCTTTTCATCTTTTGTCTGTATGAGGTCAATATTGATGTCACTGAATTAATTACAGTG  
TCCTATAGAAAATGCCATTAATAAATTATGAAC TACTATACATTATGTATATTAATTAAAACATCTTAATCCA  
GAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 76**

MAAALWGFFPVLLLLLLSGDVQSSEVPGAAAE GSGSGVGIGDRFKIEGRAVVPGVKPDWISAARVLVDGEEHV  
GFLKTDGSFVVHDIPSGSYVVEVVSPAYRFD PVRVDITSKGKMRARYVNYIKTSEVVRLPYPLQMKSSGPPSYFI  
KRESWGWTDFLMNPMVMMMLVPLLLIFVLLPKVVNTSDPDMRREMEQSMNMLNSNHELDPVSEFMTRLFSSKSSGK  
SSSGSSKTGKSGAGKRR

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**FIGURE 77**

TGGGACTTATAGAAGGGAGAGGAGCGAACATGGCAGCGCGTTGGCGGTTTTGGTGTGTCTCTGTGACCATGGTGG  
TGGCGCTGCTCATCGTTTTGCGACGTTCCCTCAGCCTCTGCCCAAAGAAAGAAGGAGATGGTGTATCAGAAAAGG  
TTAGTCAGCTGATGGAATGGACTAACAAAAGACCTGTAATAAGAATGAATGGAGACAAGTTCGGTCGCCTTGTGA  
AAGCCCCACCGAGAAATTACTCCGTTATCGTCATGTTCACTGCTCTCCAAGTGCATAGACAGTGTGTCGTTTGCA  
AGCAAGCTGATGAAGAATTCCAGATCCTGGCAAAC TCCTGGCGATACTCCAGTGCATTACCAACAGGATATTTTT  
TTGCCATGGTGGATTTTGATGAAGGCTCTGATGTATTTTCAGATGCTAAACATGAATTCAGCTCCAACTTTCATCA  
ACTTTCCCTGCAAAAGGGAAACCCAAACGGGGTGATACATATGAGTTACAGGTGCGGGGTTTTTCAGCTGAGCAGA  
TTGCCCCGGTGGATCGCCGACAGAACTGATGTCAATATTAGAGTGATTAGACCCCAAATTATGCTGGTCCCCCTTA  
TGTTGGGATTGCTTTTGGCTGTTATTGGTGGACTTGTGTATCTTCGAAGAAGTAATATGGAATTTCTCTTTAATA  
AAACTGGATGGGCTTTTGCAGCTTTGTGTTTTGTGCTTGCTATGACATCTGGTCAAATGTGGAACCATATAAGAG  
GACCACCATATGCCATAAGAATCCCCACACGGGACATGTGAATTATATCCATGGAAGCAGTCAAGCCCCAGTTTG  
TAGCTGAAACACACATTGTTCTTCTGTTTAAATGGTGGAGTTACCTTAGGAATGGTGTCTTTTGTGTGAAGCTGCTA  
CCTCTGACATGGATATTGGAAAGCGAAAGATAATGTGTGTGGCTGGTATTGGACTTGTGTATTATTCCTTCAGTT  
GGATGCTCTCTATTTTTAGATCTAAATATCATGGCTACCCATACAGCTTTCTGATGAGTTTAAAAAGGTCCCAGAG  
ATATATAGACACTGGAGTACTGGAAATTGAAAAACGAAAAATCGTGTGTGTTTGAAAAGAAGAATGCAACTTGTAT  
ATTCTGTATTACCTCTTTTTTTCAAGTGATTTAAATAGTTAATCATTTAACCAAAGAAGATGTGTAGTGCCTTAA  
CAAGCAATCCTCTGTCAAAATCTGAGGTATTTGAAAATAATTATCCTCTTAACCTTCTCTTCCCAGTGAACTTTA  
TGGAACATTTAATTTAGTACAATTAAGTATATTATAAAAAATTGTAAACTACTACTTTGTTTTAGTTAGAACAAA  
GCTCAAAACTACTTTAGTTAACTTGGTCATCTGATCTTATATTGCCTTATCCAAAGATGGGGAAAGTAAGTCCTG  
ACCAGGTGTTCCACATATGCCTGTTACAGATAACTACATTAGGAATTCATTCTTAGCTTCTTCATCTTTGTGTG  
GATGTGTATACTTTACGCATCTTTCCTTTTGAGTAGAGAAATTATGTGTGTGTCATGTGGTCTTCTGAAAATGGAAC  
ACCATTCTTCAGAGCACACGTCTAGCCCTCAGCAAGACAGTTGTTTCTCCTCCTCCTTGCAATTTCCCTACTGCG  
CTCCAGCCTGAGTGATAGAGTGAGACTCTGTCTCAAAAAAAAAGTATCTCTAAATACAGGATTATAATTTCTGCT  
TGAGTATGGTGTAACTACCTTGTATTTAGAAAGATTTTCAGATTCATTCCATCTCCTTAGTTTTCTTTAAGGTG  
ACCCATCTGTGATAAAAAATATAGCTTAGTGCTAAAATCAGTGTAACCTTATACATGGCCTAAAATGTTTCTACAAA  
TTAGAGTTTTGTCACTTATTCCATTTGTACCTAAGAGAAAAATAGGCTCAGTTAGAAAAGGACTCCCTGGCCAGGC  
GCAGTGACTTACGCCTGTAATCTCAGCACTTTGGGAGGCCAAGGCAGGCAGATCACGAGGTCAGGAGTTCGAGAC  
CATCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATATAAAAATTAGCTGGGTGTGGTGGCAGGAGCCTG  
TAATCCCAGCTGCACAGGAGGCTGAGGCACGAGAATCACTTGAACCTCAGGAGATGGAGGTTTCAGTGAGCCGAGA  
TCACGCCACTGCACTCCAGCCTGGCAACAGAGCGAGACTCCATCTCAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 78**

MAARWRFWCVSVTMVALLIVCDVPSASAQRKKEMVLSEKVSQIMIEWTNKRPVIRMNGDKFRRLVKAPPRNYSVI  
VMFTALQLHRQCVVCKQADEEFQILANSWRYSSAF TNRIFFAMVDFDEGSDVFQMLNMNSAPTFINFPAGKPKR  
GDTYELQVRGFSAEQIARWIADRTDVNIRVIRPPNYAGPLMLGLLLAVIGGLVYLRRSNMEFLFNKTGWAFALC  
FVLAMTSGQMWNHIRGPPYAHKNPHTGHVNYIHGS SQAQFVAETHIVLLFNNGVTLGMVLLCEAATSDMDIGKRK  
IMCVAGIGLVVLEFFSWMLSIFRSKYHGYPYSFLMS

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**FIGURE 79**

GGGGGAGGCCCGCGTCGATCCTGGGTTGGAGGAGGTGGCGGCCGCTGAGGCTGCGGCGTGAAGACGGCGGGCATG

GTGGGGCGGGAGAAAGAGCTCTCTATACACTTTGTTCGGGAGCTGTGCGGCTGGTGGAGGAGGAAGTTAACATC  
CCTAATAGGAGGGTTCTGGTTACTGGTGCCACTGGGCTTCTTGGCAGAGCTGTACACAAAGAATTTAGCAGAAT  
AATTGGCATGCAGTTGGCTGTGGTTTCAGAAGAGCAAGACCAAATTTGAACAGGTTAATCTGTTGGATTCTAAT  
GCAGTTCATCACATCATTTCATGATTTTCAGCCCCATGTTATAGTACATTGTGCAGCAGAGAGAAGACCAGATGTT  
GTAGAAAATCAGCCAGATGCTGCCTCTCAACTTAATGTGGATGCTTCTGGGAATTTAGCAAAGGAAGCAGCTGCT  
GTTGGAGCATTTCTCATCTACATTAGCTCAGATTATGTATTTGATGGAACAAATCCACCTTACAGAGAGGAAGAC  
ATACCAGCTCCCCTAAATTTGTATGGCAAAACAAAATTAGATGGAGAAAAGGCTGTCCTGGAGAACAAATCTAGGA  
GCTGCTGTTTTGAGGATTCTATTTCTGTATGGGGAAGTTGAAAAGCTCGAAGAAAGTGCAGTGACTGTTATGTTT  
GATAAAGTGCAGTTCAGCAACAAGTCAGCAACATGGATCACTGGCAGCAGAGGTTCCCCACACATGTCAAAGAT  
GTGGCCACTGTGTGCCGGCAGCTAGCAGAGAAGAGAATGCTGGATCCATCAATTAAGGGAACCTTTCACTGGTCT  
GGCAATGAACAGATGACTAAGTATGAAATGGCATGTGCAATTGCAGATGCCCTTCAACCTCCCCACCACTCACTTA  
AGACCTATTACTGACAGCCCTGTCCTAGGAGCACAACGTCCGAGAAATGCTCAGCTTGACTGCTCCAAATTGGAG  
ACCTTGGGCATTGGCCAACGAACACCATTTTGAATTGGAATCAAAGAATCACTTTGGCCTTTTCTCATTGACAAG  
AGATGGAGACAAACGGTCTTTTCATTAGTTTTATTTGTGTTGGGTTCTTTTTTTTTTTTAAATGAAAAGTATAGTATG  
TGGCCCTTTTTTAAAGAACAAAGGAAATAGTTTTGTATGAGTACTTTAATTGTGACTCTTAGGATCTTTCAGGTAA  
ATGATGCTCTTGCAGTGTGAAATTGTCTAAAGAACTAAAGGGCAGTCATGCCCTGTTTGCAGTAATTTTTCTT  
TTTATCATTATGTTTGTCTGGCTAAACTTGGAGTTTGAGTATAGTAAATTATGATCCTTAAATATTTGAGGGTC  
AGGATGAAGCAGATCTGCTGTAGACTTTTTAGATGAAATTGTTTCATTCTCGTAACCTCCATATTTTCAGGATTTT  
TGAAGCTGTTGACCATTTTCATGTTGATTATTTTAAATTGTGTGGAATAGTATAAAAATCATTGGTGTTCATTATT  
TGCTTTGCCTGAGCTCAGATCAAAATGTTTGAAGAAAGGAACCTTTATTTTTGCAAGTTACGTACAGTTTTTATGC  
TTGAGATATTTCAACATGTTATGTATATTGGAACCTTCTACAGCTTGATGCCTCCTGCTTTTATAGCAGTTTATGG  
GGAGCACTTGAAAGAGCGTGTGTACATGTATTTTTTTTCTAGGCAAACATTGAATGCAAACGTGTATTTTTTTAA  
TATAAATATATAACTGTCCTTTTTCATCCCATGTTGCCGCTAAGTGATATTTTCATATGTGTGGTTATACTCATAAT  
AATGGGCCCTTGTAAGTCTTTTACCATTTCATGAATAATAATAAATATGTACTGCTGGCATGTAATGCTTAGTTTT  
CTTGATTTACTTCTTTTTTTTTTAAATGTAAGGACCAAACCTTCTAACTAATTGTTCTTTTGTGCTTTAATTTTT  
AAAAATTACATTCTTCTGATGTAACATGTGATACATACAAAAGAATATAGTTTAATATGTATTGAAATAAAACAC  
AATAAAATTAAAAA



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**FIGURE 80**

MVGREKELSIHFVPGSCLVVEEVNIPNRRVLVTGATGLLGRAVHKEFQQNNWHAVGCGFRRARPKFEQVNLLDS  
NAVHHIIHDFQPHVIVHCAAERRPDVVENQPDAASQLNVDASGNLAKEAAAVGAFLIYISSDYVFDGTNPPYREE  
DIPAPLNLYGKTKLDGEKAVLENNLGAAVLRIPILYGEVEKLEESAVTVMFDKVQFSNKSANMDHWQQRFP THVK  
DVATVCRQLAEKRMLDPSIKGTFHWSGNEQMTKYEMACAIADAFNLPSHLRPITDSPVLGAQRPRNAQLDCSKL  
ETLGIGQRTPFIRIGIKESLWPFLIDKRWRQTVFH

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**FIGURE 81**

GAAGCAGCAGGTACCCCCCTCCACATCCCTAGGGCTCTGTGATGTAGGCAGAGGCCCGTGGGAGTCAGCATGCGGC  
GTGGCTGGGCGCCCCCTTGCTCCTGCTGCTGCTCCAGGGAGGCTGGGGCTGCCCGACCTCGTCTGCTACACCG  
ATTACCTCCAGACGGTCATCTGCATCCTGGAAATGTGGAACCTCCACCCCAGCACGCTCACCCTTACCTGGCAAG  
ACCAGTATGAAGAGCTGAAGGACGAGGCCACCTCCTGCAGCCTCCACAGGTCGGCCCCACAATGCCACGCATGCCA  
CCTACACCTGCCACATGGATGTATTCCACTTCATGGCCGACGACATTTTCAGTGTCAACATCACAGACCAGTCTG  
GCAACTACTCCAGGAGTGTGGCAGCTTTTCCTGGCTGAGAGCATCAAGCCGGCTCCCCCTTTCAACGTGACTG  
TGACCTTCTCAGGACAGTATAATATCTCCTGGCGCTCAGATTACGAAGACCTGCCTTCTACATGCTGAAGGGCA  
AGCTTCAGTATGAGCTGCAGTACAGGAACCGGGGAGACCCCTGGGCTGTGAGTCCGAGGAGAAAGCTGATCTCAG  
TGGACTCAAGAAGTGTCTCCCTCCTCCCCCTGGAGTTCCGCAAAGACTCGAGCTATGAGCTGCAGGTGCGGGCAG  
GGCCCATGCCTGGCTCCTCCTACCAGGGGACCTGGAGTGAATGGAGTGACCCGGTCATCTTTCAGACCCAGTCAG  
AGGAGTTAAAGGAAGGCTGGAACCCCTCACCTGCTGCTTCTCCTCCTGCTTGTATAGTCTTCATTCTGCCTTCT  
GGAGCCTGAAGACCCATCCATTGTGGAGGCTATGGAAGAAGATATGGGCCGTCCCCAGCCCTGAGCGGTTCTTCA  
TGCCCCCTGTACAAGGGCTGCAGCGGAGACTTCAAGAAATGGGTGGGTGCACCCCTTCACTGGCTCCAGCCTGGAGC  
TGGGACCCCTGGAGCCAGAGGTGCCCTCCACCCCTGGAGGTGTACAGCTGCCACCCACCACGGAGCCCGGCCAAGA  
GGCTGCAGCTCACGGAGCTACAAGAACCAGCAGAGCTGGTGGAGTCTGACGGTGTGCCAAGCCAGCTTCTGGC  
CGACAGCCCAGAATCGGGGGGCTCAGCTTACAGTGAAGGAGAGGGATCGGCCATACGGCCTGGTGTCCATTGACA  
CAGTGACTGTGCTAGATGCAGAGGGGCCATGCACCTGGCCCTGCAGCTGTGAGGATGACGGCTACCCAGCCCTGG  
ACCTGGATGCTGGCCTGGAGCCCAGCCAGGCCTAGAGGACCCACTCTTGATGCAGGGACCACAGTCTGTCTCT  
GTGGCTGTGTCTCAGCTGGCAGCCCTGGGCTAGGAGGGCCCCCTGGGAAGCCTCCTGGACAGACTAAAGCCACCCC  
TTGCAGATGGGGAGGACTGGGCTGGGGGACTGCCCTGGGGTGGCCGGTCACTGGAGGGGTCTCAGAGAGTGAGG  
CGGGCTCACCCCTGGCCGGCCTGGATATGGACACGTTTGACAGTGGCTTTGTGGGCTCTGACTGCAGCAGCCCTG  
TGGAGTGTGACTTCACAGCCCCGGGGACGAAGGACCCCCCGGAGCTACCTCCGCCAGTGGGTGGTCATTCTC  
CGCCACTTTTCAGCCCTGGACCCAGGCCAGCTAATGAGGCTGACTGGATGTCCAGAGCTGGCCAGGCCACTGGG  
CCCTGAGCCAGAGACAAGGTACCTGGGCTGTGATGTGAAGACACCTGCAGCCTTTGGTCTCCTGGATGGGCCCTT  
TGAGCCTGATGTTTACAGTGTCTGTGTGTGTGTGTGCATATGTGTGTGTGTGCATATGCATGTGTGTGTGTGT  
GTGTCTTAGGTGCGCAGTGGCATGTCCACGTGTGTGTGTGATTGCACGTGCCCTGTGGGCCTGGGATAATGCCCAT  
GGTACTCCATGCATTACCTGCCCTGTGCATGTCTGGACTCACGGAGCTCACCCATGTGCACAAGTGTGCACAGT  
AAACGTGTTTGTGGTCAACAGATGACAACAGCCGTCTCCCTCCTAGGGTCTTGTGTTGCAAGTTGGTCCACAGC  
ATCTCCGGGGCTTTGTGGGATCAGGGCATTGCCTGTGACTGAGGCGGAGCCCAGCCCTCCAGCGTCTGCCTCCAG  
GAGCTGCAAGAAGTCCATATTGTTCTTATCACCTGCCAACAGGAAGCGAAAGGGGATGGAGTGAGCCCATGGTG  
ACCTCGGGAATGGCAATTTTTTGGGCGGCCCTGGACGAAGGTCTGAATCCCGACTCTGATACCTTCTGGCTGTG  
CTACCTGAGCCAAGTCGCCTCCCCCTCTCTGGGCTAGAGTTTCTTATCCAGACAGTGGGGAAGGCATGACACACC  
TGGGGGAAATTGGCGATGTACCCGTGTACGGTACGCAGCCCAGAGCAGACCCTCAATAAACGTGAGCTTCTTCT  
CTTCTGCGGCCAGAGCCGAGGCGGGCGGGGGTGAACATCAATCGTCAGCGACAGCCTGGGCACCCGCGGGGCC  
GTCCCGCCTGCAGAGGGCCACTCGGGGGGGTTTCAGGCTTAAATCAGTCCGTTTTCGTCTCTTGGAAACAGCTC  
CCCACCAACCAAGATTTCTTTTTCTAACTTCTGCTACTAAGTTTTTAAAAATTCCTTTATGCACCCAAGAGATA  
TTTATTAAACACCAATTACGTAGCAGGCCATGGCTCATGGGACCCACCCCCGTGGCACTCATGGAGGGGGCTGC  
AGGTTGGAACATATGCAGTGTGCTCCGGCCACACATCCTGCTGGGCCCCCTACCCTGCCCCAATTCAATCCTGCCA  
ATAAATCCTGTCTTATTTGTTTCATCCTGGAGAATTGA

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**FIGURE 82**

MPRGWAAPLLLLLLQGGWGCPDLVCYTDYLQTVICILEMWNLHPSTLTTLTWQDQYEELKDEATSCSLHRSAHNAT  
HATYTTCHMDVFHFMAADDIFSVNITDQSGNYSQECGSFLLAESIKPAPPFNVTVTFSGQYNISWRSDYEDPAFYML  
KGKLQYELQYRNRGDPWAVSPRRKLISVDSRSVSLPLEFRKDSSYELQVRAGPMPGSSYQGTWSEWSDPVIFQT  
QSEELKEGWNPHLLLLLLLVIVFIPAFWSLKTHPLWRLWKKIWAVPSPERFFMPLYKGCSGDFKKWVGAPFTGSS  
LELGWSPPEVPSTLEVYSCHPPRSPAKRLQLTELQEPALVESDGVPKPSFWPTAQNSGGSAYSEERDRPYGLVS  
IDTVTVLDAEGPCTWPCSCEDDGYPALDLDAGLEPSPGLEDPLLDAGTTVLSCGCVSAGSPGLGGPLGSLLDRLK  
PPLADGEDWAGGLEPWGGRSPGGVSESEAGSPLAGLDMDTFDSGFVGSDCSSPVECDFTSPGDEGPFRSYLRQWVV  
IPPLSSPGPQAS

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**FIGURE 83**

GGCACGAGGAGGTGTGGACGCTGTGTATGAAATGTCTTTCCTCCAGGACCCAAGTTTCTTCACCATGGGGATGTG  
GTCCATTGGTGCAGGAGCCCTGGGGGCTGCTGCCTTGGCATTGCTGCTTGCCAACACAGACGTGTTTCTGTCCAA  
GCCCCAGAAAGCGGCCCTGGAGTACCTGGAGGATATAGACCTGAAAACACTGGAGAAGGAACCAAGGACTTTCAA  
AGCAAAGGAGCTATGGGAAAAAAATGGAGCTGTGATTATGGCCGTGCGGAGGCCAGGCTGTTTCTCTGTGAGAGA  
GGAAGCTGCGGATCTGTCTCCCTGAAAAGCATGTTGGACCAGCTGGGCGTCCCCCTCTATGCAGTGGTAAAGGA  
GCACATCAGGACTGAAGTGAAGGATTTCCAGCCTTATTTCAAAGGAGAAAATCTTCCTGGATGAAAAGAAAAAGTT  
CTATGGTCCACAAAGGCGGAAGATGATGTTTATGGGATTTATCCGTCTGGGAGTGTGGTACAACCTTCTTCCGAGC  
CTGGAACGGAGGCTTCTCTGGAACCTGGAAGGAGAAGGCTTCATCCTTGGGGGAGTTTTCTGTTGGTGGGATCAGG  
AAAGCAGGGCATTCTTCTTGAGCACCGAGAAAAAGAATTTGGAGACAAAGTAAACCTACTTTCTGTTCTGGAAGC  
TGCTAAGATGATCAAACACAGACTTTGGCCTCAGAGAAAAAAATGATTGTGTGAAACTGCCAGCTCAGGGATAA  
CCAGGGACATTACCTGTGTTTATGGGATGTATTGTTTCCACTCGTGTCCCTAAGGAGTGAGAAACCATTTATA  
CTCTACTCTCAGTATGGATTATTAATGTATTTTAAATATTCTGTTTAGGCCCCACTAAGGCAAAATAGCCCCAAAAC  
AAGACTGACAAAAATCTGAAAACTAATGAGGATTATTAAGCTAAAACCTGGGAAATAGGAGGCTTAAAATTGAC  
TGCCAGGCTGGGTGCAGTGGCTCACACCTGTAATCCAGCACTTTGGGAGGCCAAGGTGAGCAAGTCACTTGAGG  
TCGGGAGTTCGAGACCAGCCTGAGCAACATGGCGAAACCCCGTCTCTACTAAAAATACAAAAATCACCCGGGTGT  
GGTGGCAGGCACCTGTAGTCCCAGCTACCCGGGAGGCTGAGGCAGGAGAATCACTTGAACCTGGGAGGTGGAGGT  
TGCGGTGAGCTGAGATCACACCACTGTATTCCAGCCTGGGTGACTGAGACTCTAACTAAAAAAAAAAAAAAAAAA  
AAA

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**FIGURE 84**

MWSIGAGALGAAALALLLANTDVFLSKPQKALEYLEDIDLKTLEKEPRTFKAKELWEKNGAVIMAVRRPGCF  
LC  
REEAADLSSLKSMLDQLGVPLYAVVKEHIRTEVKDFQPYFKGEIFLDEKKKFYGPQRRKMMFMGFIRLGVWYNFF  
RAWNGGFSGNLEGEFGFILGGVFVVGSGKQGILLEHREKEFGDKVNLLSVLEAAKMIKPQTLASEKK

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**FIGURE 85**

GGCACGAGGCCTCGTGCCGCCGGGCTCTTGGTACCTCAGCGCGAGCGCCAGGCGTCCGGCCGCCGTGGCT**ATGTT**  
CGTGTCCGATTTCCGCAAAGAGTTCTACGAGGTGGTCCAGAGCCAGAGGGTCCTTCTCTTCGTGGCCTCGGACGT  
GGATGCTCTGTGTGCGTGCAAGATCCTTCAGGCCTTGTTCCAGTGTGACCACGTGCAATATACGCTGGTTCCAGT  
TTCTGGGTGGCAAGAAGCTTGAAACTGCATTTCTTGAGCATAAAGAAGAGTTTCATTATTTTATTCTCATAAACTG  
TGGAGCTAATGTAGACCTATTGGATATTCTTCAACCTGATGAAGACACTATATTCTTTGTGTGTGACACCCATAG  
GCCAGTCAATGTGTCGTCATGTATACACGATACCCAGATCAAATTACTCATTAAACAAGATGATGACCTTGAAGT  
TCCCGCCTATGAAGACATCTTCAGGGATGAAGAGGAGGATGAAGAGCATTTCAGGAAATGACAGTGTGGGTCAGA  
GCCTTCTGAGAAGCGCACACGGTTAGAAGAGGAGATAGTGGAGCAAACCATGCGGAGGAGGCAGCGCGAGAGTG  
GGAGGCCCGGAGAAGAGACATCCTCTTTGACTACGAGCAGTATGAATATCATGGGACATCGTCAGCCATGGTGTAT  
GTTTGAGCTGGCTTGGATGCTGTCCAAGGACCTGAATGACATGCTGTGGTGGGCCATCGTTGGACTAACAGACCA  
GTGGGTGCAAGACAAGATCACTCAAATGAAATACGTGACTGATGTTGGTGTCTGACAGCGCCACGTTTCCCGCCA  
CAACCACCGGAACGAGGATGAGGAGAACACACTCTCCGTGGACTGCACACGGATCTCCTTTGAGTATGACCTCCG  
CCTGGTGTCTTACCAGCACTGGTCCCTCCATGACAGCCTGTGCAACACCAGCTATACCGCAGCCAGGTTCAAGCT  
GTGGTCTGTGCATGGACAGAAGCGGCTCCAGGAGTTCCTTGACAGACATGGGTCTTCCCCTGAAGCAGGTGAAGCA  
GAAGTTCAGGCCATGGACATCTCCTTGAAGGAGAATTTGCGGGAAATGATTGAAGAGTCTGCAAATAAATTTGG  
GATGAAGGACATGCGCGTGCAGACTTTCAGCATTCAATTTGGGTTCAAGCACAAAGTTTCTGGCCAGCGACGTGGT  
CTTTGCCACCATGTCTTTGATGGAGAGCCCCGAGAAGGATGGCTCAGGGACAGATCACTTCATCCAGGCTCTGGA  
CAGCCTCTCCAGGAGTAACCTGGACAAGCTGTACCATGGCCTGGAACTCGCCAAGAAGCAGCTGCGAGCCACCCA  
GCAGACCATTGCCAGCTGCCTTTGCACCAACCTCGTCATCTCCCAGGGGCCTTTCTGTACTGCTCTCTCATGGA  
GGGCACTCCAGATGTCATGCTGTTCTCTAGGCCGGCATCCCTAAGCCTGCTCAGCAAACACCTGCTCAAGTCCTT  
TGTGTGTTGACAAAGAACCGGCGCTGCAAACCTGTGCCCTGGTGTATGGCTGCCCCCTGAGCATGGAGCATGG  
CACAGTGACCGTGGTGGGCATCCCCCAGAGACCGACAGCTCGGACAGGAAGAACTTTTTTGGGAGGGCGTTTGA  
GAAGGCAGCGGAAAGCACCAGCTCCCGGATGCTGCACAACCATTTTGACCTCTCAGTAATTGAGCTGAAAGCTGA  
GGATCGGAGCAAGTTTCTGGACGCACTTATTTCCCTCCTGTCT**TAG**GAATTTGATTCTTCCAGAATGACCTTCTT  
ATTTATGTAAGTGGCTTTCAATTTAGATTGTAAGTTATGGACATGATTTGAGATGTAGAAGCCATTTTTTATTAA  
TAAATGCTTATTTTAGGCTCCGTCCCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 86**

MFVSDFRKEFYEVVQSQRVLLFVASDVDALCACKILQALFQCDHVQYTLVPVSGWQELETAFLEHKEQFHYFILI  
NCGANVDLLDILQPDEDITFFVCDTHRPVNVVNVYNDTQIKLLIKQDDDLVPAYEDIFRDEEEDDEHSGNDSGD  
SEPSEKTRLEEEIVEQTMRRRQRREWEARRRDILFDYEQYEHGTSSAMVMFELAWMLSKDLNDMLWWAIVGLT  
DQWVQDKITQMKYVTDVGLQRHVSRRHNHRNEDEENTLSVDCTRISFEYDLRLVLYQHWSLHDSLNTSYTAARE  
KLWSVHGQKRLQEFADMGLPLKQVKQKFQAMDISLKENLREMIEESANKFGMKDMRVQTFSIHFGFKHKFLASD  
VVFATMSLMESPEKDGSGTDHFIQALDSLRSNLDKLYHGLELAKKQLRATQQTIASCLCTNLVISQGPFLYCSL  
MEGTPDVMLFSRPASLSLLSKHLLKSFVCSTKNRRCKLLPLVMAAPLSMEHGTVTTVGIPPETDSSDRKNFFGRA  
FEKAAESTSSRMLHNHFDLSVIELKAEDRSKFLDALISLLS

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**FIGURE 87**

ACCGGGCACCGGACGGCTCGGGTACTTTTCGTTCTTAATTAGGTCATGCCCGTGTGAGCCAGGAAAGGGCTGTGTT  
TATGGGAAGCCAGTAACACTGTGGCCTACTATCTCTTCCGTGGTGCCATCTACATTTTTGGGACTCGGGAATTAT  
GAGGTAGAGGTGGAGGCGGAGCCGGATGTCAGAGGTCCTGAAATAGTCACCATGGGGGAAAATGATCCGCCTGCT  
GTTGAAGCCCCCTTCTCATTCCGATCGCTTTTTTGGCCTTGATGATTTGAAAATAAGTCCTGTTGCACCAGATGCA  
GATGCTGTTGCTGCACAGATCCTGTCACTGCTGCCATTGAAGTTTTTTTCCAATCATCGTCATTGGGATCATTGCA  
TTGATATTAGCACTGGCCATTGGTCTGGGCATCCACTTCGACTGCTCAGGGAAGTACAGATGTCGCTCATCCTTT  
AAGTGATATCGAGCTGATAGCTCGATGTGACGGAGTCTCGGATTGCAAAGACGGGGAGGACGAGTACCGCTGTGTC  
CGGGTGGGTGGTCAGAATGCCGTGCTCCAGGTGTTTACAGCTGCTTCGTGGAAGACCATGTGCTCCGATGACTGG  
AAGGGTCACTACGCAAATGTTGCCTGTGCCCACTGGGTTTCCCAAGCTATGTGAGTTCAGATAACCTCAGAGTG  
AGCTCGCTGGAGGGGCGAGTTCCGGGAGGAGTTTGTGTCCATCGATCACCTCTTGCCAGATGACAAGGTGACTGCA  
TTACACCACTCAGTATATGTGAGGGAGGGATGTGCCTCTGGCCACGTGGTTACCTTGCAAGTGCACAGCCTGTGGT  
CATAGAAGGGGCTACAGCTCACGCATCGTGGGTGGAAACATGTCCTTGCTCTCGCAGTGGCCCTGGCAGGCCAGC  
CTTCAGTTCCAGGGCTACCACCTGTGCGGGGGCTCTGTTCATCACGCCCTGTGCATCATCACTGCTGCACACTGT  
GTTTATGACTTGTACCTCCCCAAGTCATGGACCATCCAGGTGGGTCTAGTTTCCCTGTTGGACAATCCAGCCCCA  
TCCCACTTGGTGGAGAAGATTGTCTACCACAGCAAAGTACAAGCCAAAGAGGCTGGGCAATGACATCGCCCTTATG  
AAGCTGGCCGGGCCACTCACGTTCAATGGTACATCTGGGTCTCTATGTGGTTCTGCAGCTCTTCCTTTGTTTCAA  
GAGGATTTGCAATTGCTCATTGAAGCATTCTTATGATGGCTGCTTTATAATCCTTGTCAGATATTAATAATTCCA  
ACTCCTGATTCATGTTGGTGTGGCATCAGTTGATTATCTTTTCTCATTAAATTTGTGATGCTCCTAAAAAAA  
AAAAAAA



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**FIGURE 88**

MGENDPPAVEAPFSFRSLFGLDDLKISPVAPDADAVAAQILSLLPLKFFPIIVIGIIALILALAIGLGIHFDCSG  
KYRCRSSFKCIELIARCDGVSDCKDGEDEYRCVRVGGQNAV LQVFTAASWKTMCSDDWKGHYANVACAQLGFPSY  
VSSDNLRVSSLEGQFREEFVSIDHLLPDDKV TALHHSVYVREGCASGHVVT LQCTACGHRRGYSSRIVGGNMSLL  
SQWPWQASLQFQGYHLCGGSVITPLWIITA AHCVDLYLPKSWTIQVGLVSLLDNPAPSHLVEKIVYHSKYKPKR  
LGNDIALMKLAGPLTFNGTSGSLCGSAALPLFQEDLQLLIEAFL

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**FIGURE 89**

**ATGGCACAGCACGGGGCGATGGGCGCGTTTCGGGGCCCTGTGCGGCCTGGCGCTGCTGTGCGCGCTCAGCCTGGGT**  
**CAGCGCCCCACCGGGGGTCCCGGGTGCGGCCCTGGGCGCCTCCTGCTTGGGACGGGAACGGACGCGCGCTGCTGC**  
**CGGGTTCACACGACGCGCTGCTGCCGCGATTACCCGGGCGAGGAGTGCTGTTCCGAGTGGGACTGCATGTGTGTC**  
**CAGCCTGAATTCCACTGCGGAGACCCTTGCTGCACGACCTGCCGGCACCACCCTTGTCCCCAGGCCAGGGGGTA**  
**CAGTCCCAGGGGAAATTCAGTTTTGGCTTCCAGTGATCGACTGTGCCTCGGGGACCTTCTCCGGGGGCCACGAA**  
**GGCCACTGCAAACCTTGGACAGACTGCACCCAGTTCGGGTTTCTCACTGTGTTCCCTGGGAACAAGACCCACAAC**  
**GCTGTGTGCGTCCCAGGGTCCCCGCCGGCAGAGCCGCTTGGGTGGCTGACCGTCGTCCTCCTGGCCGTGGCCGCC**  
**TGCGTCCTCCTCCTGACCTCGGCCCAGCTTGGACTGCACATCTGGCAGCTGAGGAGTCAGTGCATGTGGCCCCGA**  
**GAGACCCAGCTGCTGCTGGAGGTGCCGCCGTCGACCGAAGACGCCAGAAGCTGCCAGTTCCCCCAGGAAGAGCGG**  
**GGCGAGCGATCGGCAGAGGAGAAGGGGCGGCTGGGAGACCTGTGGGTTGA**

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**FIGURE 90**

MAQHGMGAFRALCGLALLCALSLGQRPTGGPGCGPGRLLLTGTGDARCCRVHTTRCCRDYPGEECCSEWDCMCV  
QPEFHCGDPCCTTCRHHPCPPGQGVQSQKFSFGFQCIDCASGTFSGGHEGHCKPWTIDCTQFGFLTVPNGKTHN  
AVCVPGSPPAEPLGWLTVVLLAVAACVLLLTSAQLGLHIWQLRSQCMWPRETQLLLEVPPSTEDARSCQFPEER  
GERSAEEKGRLGDLWV

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**FIGURE 91**

AGTGCGCGAAGATGCGAAAGGTGGTTTTGATCACCGGGGCTAGCAGTGGCATTGGCCTGGCCCTCTGCAAGCGGC  
TGCTGGCGGAAGATGATGAGCTTCATCTGTGTTTGGCGTGCAGGAACATGAGCAAGGCAGAAGCTGTCTGTGCTG  
CTCTGCTGGCCTCTCACCCCACTGCTGAGGTCACCATTGTCCAGGTGGATGTCAGCAACCTGCAGTCGGTCTTCC  
GGGCCTCCAAGGAACCTTAAGCAAAGGTTTCAGAGATTAGACTGTATATATCTAAATGCTGGGATCATGCCTAATC  
CACAACTAAATATCAAAGCACTTTTCTTTGGCCTCTTTTCAAGAAAAGTGATTTCATATGTTCTCCACAGCTGAAG  
GCCTGCTGACCCAGGGTGATAAGATCACTGCTGATGGACTTCAGGAGGTGTTTGAGACCAATGTCTTTGGCCATT  
TTATCCTGATTGCGGAACCTGGAGCCTCTCCTCTGTACAGTGACAATCCATCTCAGCTCATCTGGACATCATCTC  
GCAGTGCAAGGAAATCTAATTTAGCCTCGAGGACTTCCAGCACAGCAAAGGCAAGGAACCCCTACAGCTCTTCCA  
AATATGCCACTGACCTTTTGAGTGTGGCTTTGAACAGGAACTTCAACCAGCAGGGTCTCTATTCCAATGTGGCCT  
GTCCAGGTACAGCATTGACCAATTTGACATATGGAATTCTGCCTCCGTTTATATGGACGCTGTTGATGCCGGCAA  
TATTGCTACTTCGCTTTTTTGCAAATGCATTCACTTTGACACCATATAATGGAACAGAAGCTCTGGTATGGCTTT  
TCCACCAAAGCCTGAATCTCTCAATCCTCTGATCAATATCTGAGTGCCACCACTGGCTTTGGAAGAAATTATA  
TTATGACCCAGAAGATGGACCTAGATGAAGACACTGCTGAAAAATTTTATCAAAAGTTACTGGAACCTGGAAAAGC  
ACATTAGGGTCACTATTCAAAAAACAGATAATCAGGCCAGGCTCAGTGGCTCATGCCTATAAATTCAGCACTTTG  
GGAGGCCAAGGCAGAAGGATCACTTGAGACCAGGAGTTCAAGACCAGCCTGAGAAACATAGTGAGCCCTTGCTCTC  
TACAAAAAGAAATAAAAAATAATAGCTGGGTGTGGTGGCATGCGCATGTAGTCCCAGCTACTCAGAAGGATGAGGT  
GGGAGGATCTCTTGAGGCTGGGAGGCAGAGGTTGCAGTGAGCTGAGATTGTGCCACTGCACTCCAGCCTGGGTGA  
CAGCGAGACCCTGTCTCAAAATATGTATATATTTAATATATATATAAAACCAGAGCTGACAATGACACTCTGGAA  
CATTGCATACCTTCTGTACATTCTGGGGTACATGGATTCTACTGAGTTGGATAATATGCATTTGTAATAAACTA  
TGAACATGAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 92**

MRKVVLITGASSGIGLALCKRLLAEDDELHLCLACRNMSKAEAVCAALLASHPTAEVTIVQVDVSNLQSVFRASK  
ELKQRFQRLDCIYLNAGIMPNPQLNIKALFFGLFSRKVIHMFSTAEGLLTQGDKITADGLQEVFETNVFGHFILI  
RELEPLLCHSDNPSQLIWTSSRSARKSNFSLEDFQHSKGKEPYSSSKYATDLLSVALNRNFNQQGLYSNVACPGT  
ALTNLTYGILPPFIWTLMPAILLLRFFANAFTLTPYNGTEALVWLFHQKPESLNPLIKYLSATTGFGGRNYIMTQ  
KMDLDEDTAEKFYQKLELEKHIRVTIQKTDNQARLSGSL

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**FIGURE 93**

AGCCTGGGGCGGCCGGCCAGGAACCAACCCGTTAAGGTGTCTTCTCTTTAGGGATGGTGAGGTTGGAAAAAGGCTC  
CTGTAACCCCTCCTCCAGGATGAACCACTGCCAGAAGACATGGAGAACGCTCTCACCGGGAGCCAGAGCTCCCAT  
GCTTCTCTGCGCAATATCCATTCCATCAACCCACACAACCTCATGGCCAGGATTGAGTCCTATGAAGGAAGGGAA  
AAGAAAGGCATATCTGATGTCAGGAGGACTTTCTGTTTGTGTTGTCACCTTTGACCTCTTATTCGTAACATTACTG  
TGGATAATAGAGTTAAATGTGAATGGAGGCATTGAGAACACATTAGAGAAGGAGGTGATGCAGTATGACTACTAT  
TCTTCATATTTTGGATATATTTCTTCTGGCAGTTTTTCGATTTAAAGTGTTAATACTTGATATGCTGTGTGCAGA  
CTGCGCCATTGGTGGGCAATAGCGTTGACAACGGCAGTGACCAGTGCCTTTTTACTAGCAAAAAGTGATCCTTTTCG  
AAGCTTTTCTCTCAAGGGGCTTTTGGCTATGTGCTGCCCATCATTTTCATTCATCCTTGCCCTGGATTGAGACGTGG  
TTCTTGGATTTCAAAGTGTTACCTCAAGAAGCAGAAGAAGAAAACAGACTCCTGATAGTTCAGGATGCTTCAGAG  
AGGGCAGCACTTATACCTGGTGGTCTTTCTGATGGTCAGTTTTATTCCCTCCTGAATCCGAAGCAGGATCTGAA  
GAAGCTGAAGAAAAACAGGACAGTGAGAAACCACTTTTAGAAGTATGAGTACTACTTTTTGTTAAATGTGAAAAAC  
CCTCACAGAAAGTCATCGAGGCAAAAAGAGGCAGGCAGTGAGTCTCCCTGTCGACAGTAAAGTTGAAATGGTGA  
CGTCCACTGCTGGCTTTATTGAACAGCTAATAAAGATTTATTTATTGTAATACCTCACAGACGTTGCACCATATC  
CATGCACATTTAGTTGCCTGCCTGTGGCTGGTAAGGTAATGTCATGATTCATCCTCTCTTCAGTGAGACTGAGCC  
TGATGTGTTAACAAATAGGTGAAGAAAGTCTTGTGCTGTATTCCCTAATCAAAGACTTAATATATTGAAGTAACA  
CTTTTTTAGTAAGCAAGATACCTTTTTATTTCATTCACAGAATGGAATTTTTTTGTTTCATGTCTCAGATTTAT  
TTTGATTTCTTTTTTAACACTCTACATTTCCCTTGTTTTTAACTCATGCACATGTGCTCTTTGTACAGTTTTA  
AAAAGTGAATAAAATCTGACATGTCAATGTGGCTAGTTTTATTTTTCTTGTTTTGCATTATGTGTATGGCCTGA  
AGTGTGGACTTGCAAAAGGGGAAGAAAGGAATTGCGAATACATGTAAAATGTCACCAGACATTTGTATTATTTT  
TATCATGAAATCATGTTTTCTCTGATTGTTCTGAAATGTTCTAAATACTCTTATTTTGAATGCACAAAATGACT  
TAAACCATTATATCATGTTTCTTTGCGTTCAGCCAATTTCAATTTAAATGAACTAAATTAAAAA  
AAAAAAAAAAAAAAAAA

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**FIGURE 94**

MNHLPEDMENALTGSQSSHASLRNIHSINPTQLMARIESYEGREKKGISDVRRTFCLFVTFDLLFVTLLWIIELN  
VNGGIENTLEKEVMQYDYSSYFDIFLLAVFRFKVLILAYAVCRLRHWWAIALTTAVTSAFLLAKVILSKLFSQG  
AFGYVLP IISFILAWIETWFLDFKVL PQEAEENRLLIVQDASERAALIPGGLSDGQFYSPPESEAGSEEAEEKQ  
DSEKPLLEL

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**FIGURE 95**

GTCGTATTTCCAAGGACTCCAAAGCGAGGCCGGGGACTGAAGGTGTGGGTGTCGAGCCCTCTGGCAGAGGGTTAA  
CCTGGGTCAAATGCACGGATTCTCACCTCGTACAGTTACGCTCTCCGCGGCACGTCCGAAGGATTTGGAAGTCC  
TGAGCGCTCAAGTTTGTCCGTAGTCGAGAGAAGGCCATGGAGGTGCCGCCACCGGACGCXGGGAGCTTTCTCTGT  
AGAGCATTGTGCCTATTTCCCGAGTCTTTGCTGCCGAAGCTGTGACTGCCGATTCCGGAAGTCCTTGAGGAGCGT  
CAGAAGCGGCTTCCCTACGTCCCAGAGCCCTATTACCCGGAATCTGGATGGGACCGCCTCCGGGAGCTGTTTGGC  
AAAGATGAACAGCAGAGAATTTCAAAGGACCTTGCTAATATCTGTAAGACGGCAGCTACAGCAGGCATCATTGGC  
TGGGTGTATGGGGGAATACCAGCTTTTATTCATGCTAAACAACAATACATTGAGCAGAGCCAGGCAGAAATTTAT  
CATAACCGGTTTGATGCTGTGCAATCTGCACATCGTGCTGCCACACGAGGCTTCATTTCGTTATGGCTGGCGCTGG  
GGTTGGAGAACTGCAGTGTTTGTGACTATATTCAACACAGTGAACACTAGTCTGAATGTATACCGAAATAAAGAT  
GCCTTAAGCCATTTTGTAAATTGCAGGAGCTGTCACGGGAAGTCTTTTAGGATAAACGTAGGCCTGCGTGGCCTG  
GTGGCTGGTGGCATAATTGGAGCCTTGCTGGGCACCTCCTGTAGGAGGCCTGCTGATGGCATTTCAGAAGTACTCT  
GGTGAGACTGTTTCAGGAAAGAAAACAGAAGGATCGAAAGGCACCTCCATGAGCTAAAACCTGGAAGAGTGGAAGGC  
AGACTACAAGTTACTGAGCACCTCCCTGAGAAAATTGAAAGTAGTTTACAGGAAGATGAACCTGAGAATGATGCT  
AAGAAAATTGAAGCACTGCTAAACCTTCCTAGAAAACCTTCAGTAATAGATAAAACAAGACAAGGACTTGAAAGTGC  
TCTGAACTTGAAACTCACTGGAGAGCTGAAGGGAGCTGCCATGTCCGATGAATGCCAACAGACAGGCCACTCTTT  
GGTCAGCCTGCTGACAAATTTAAGTGCTGGTACCTGTGGTGGCAGTGGCTTGCTCTTGTCTTTTTCTTTCTTTT  
TAAC TAAGAATGGGGCTGTTGTACTCTCACTTTACTTATCCTTAAATTTAAATACATACTTATGTTTGTATTAAT  
CTATCAATATATGCATACATGAATATATCCACCCACCTAGATTTTAAGCAGTAAATAAAACATTTTCGCAAAAGAT  
TAAAGTTGAATTTTACAGTTAAAAA



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**FIGURE 96**

MEVPPPDAGSFLCRALCLFPRVFAAEAVTADSEVLEERQKRLPYVPEPYYPESGWDRLRELF GKDEQQRISKDLA  
NICKTAATAGIIGWVYGGIPAFIHAKQYIEQSQA E IYHNRFDAVQSAHRAATRGFIRYGWRWGWRTAVFVTIFN  
TVNTSLNVYRNKDALS HFVIAGAVTGSLFRINVGLRGLVAGGIIGALLGTPVGGLLMAFQKYSGETVQERKQKDR  
KALHELKLEEWKGR LQVTEHLPEKIESSLQEDEPENDAKKIEALLNLPRNPSVIDKQDKD

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**FIGURE 97**

GCACGAGCGATGTCGCTCGTGCTGCTAAGCCTGGCCGCGCTGTGCAGGAGCGCCGTACCCCGAGAGCCGACCGTT  
CAATGTGGCTCTGAAACTGGGCCATCTCCAGAGTGGATGCTACAACATGATCTAATCCCGGAGACTTGAGGGAC  
CTCCGAGTAGAACCTGTTACAACACTAGTGTGCAACAGGGGACTATTCAATTTTGATGAATGTAAGCTGGGTACTC  
CGGGCAGATGCCAGCATCCGCTTGTTGAAGGCCACCAAGATTTGTGTGACGGGCAAAAGCAACTTCCAGTCCTAC  
AGCTGTGTGAGGTGCAATTACACAGAGGCCTTCCAGACTCAGACCAGACCCTCTGGTGGTAAATGGACATTTTCC  
TACATCGGCTTCCCTGTAGAGCTGAACACAGTCTATTTTCATTGGGGGCCATAATATTCCTAATGCAAATATGAAT  
GAAGATGGCCCTTCCATGTCTGTGAATTTACCTCACCAGGCTGCCTAGACCACATAATGAAATATAAAAAAAG  
TGTGTCAAGGCCGGAAGCCTGTGGGATCCGAACATCACTGCTTGTGAAGAAGAATGAGGAGACAGTAGAAGTGAAC  
TTCACAACCACTCCCTTGGGAAACAGATACATGGCTCTTATCCAACACAGCACTATCATCGGGTTTTCTCAGGTG  
TTTGAGCCACACCAGAAGAAACAAACGCGAGCTTCAGTGGTGATTCCAGTGACTGGGGATAGTGAAGGTGCTACG  
GTGCAGCTGACTCCATATTTTCTACTTGTGGCAGCGACTGCATCCGACATAAAGGAACAGTTGTGCTCTGCCCA  
CAAACAGGCGTCCCTTTCCCTCTGGATAACAACAAAAGCAAGCCGGGAGGCTGGCTGCCTCTCCTCCTGCTGTCT  
CTGCTGGTGGCCACATGGGTGCTGGTGGCAGGGATCTATCTAATGTGGAGGCACGAAAGGATCAAGAAGACTTCC  
TTTTCTACCACCACACTACTGCCCCCATTAAGGTTCTTGTGGTTTTACCCATCTGAAATATGTTTCCATCACACA  
ATTTGTTACTTCACTGAATTTCTTCAAACCATTCAGAAAGTGAGGTCATCCTTGAAAAGTGGCAGAAAAAGAAA  
ATAGCAGAGATGGGTCCAGTGCAGTGGCTTGCCACTCAAAGAAGGCAGCAGACAAAGTCGTCTTCTTCTTTCC  
AATGACGTCAACAGTGTGTGCGATGGTACCTGTGGCAAGAGCGAGGGCAGTCCCAGTGAGAACTCTCAAGACTCT  
TCCCCTTGCTTTAAACCTTTTCTGCAGTGATCTAAGAAGCCAGATTTCATCTGCACAAATACGTGGTGGTCTACTT  
TAGAGAGATTGATACAAAAGACGATTACAATGCTCTCAGTGTCTGCCCCAAGTACCACCTCATGAAGGATGCCAC  
TGCTTTCTGTGCAGAACTTCTCCATGTCAAGTAGCAGGTGTCAGCAGGAAAAAGATCACAAGCCTGCCACGATGG  
CTGCTGCTCCTTGTAGCCCACCCATGAGAAGCAAGAGACCTTAAAGGCTTCTATCCCACCAATTACAGGGAAAA  
AACGTGTGATGATCCTGAAGCTTACTATGCAGCCTACAAACAGCCTTAGTAATTAAACATTTTATACCAATAAA  
ATTTTCAAATATTGCTAACTAATGTAGCATTAACTAACGATTGGAAACTACATTTACAACCTTCAAAGCTGTTTTA  
TACATAGAAATCAATTACAGTTTTAATTGAAAACATAACCATTTTGATAATGCAACAATAAAGCATCTTCAGCC  
AAAAAAAAAAAAAAAA

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**FIGURE 98**

MSLVLLSLAALCRSAVPREPTVQCGSETGPSPEWMLQHDLIPGDLRDLRVEPVTTSVATGDYSILMNVSWVLRAD  
ASIRLLKATKICVTGKSNFQSYSCVRCNYTEAFQTQTRPSGGKWTF SYIGFPVELNTVYFIGAHNIPNANMNEDG  
PSMSVNF TSPGCLDHIMKYKKKCVKAGSLWDPNITACKKNEETVEVNFTTTPLGNYMALIQHSTIIGFSQVFEP  
HQKKQTRASVVIPVTGDSEGATVQLTPYFPTCGSDCIRHKGTVVLCPTGVPFPLDNNKSKPGGWLPLLLLSLLV  
ATWVLVAGIYLMWRHERIKKTSFSTTTLLPPIKVLVVYPSEICFHHTICYFTEFLQNHCRSEVILEKWQKKKIAE  
MGPVQWLATQKKAADKVVFLSNDVNSVCDGTCGKSEGSPSENSQDSSPCL

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**FIGURE 99**

CAGCTTCCCACCTGGGCTTTCCGAGGTGCTTTCCGCCGCTGTCCCCACCACTGCAGCCATGATCTCCTTAACGGA  
CACGCAGAAAATTGGAATGGGATTAAACAGGATTTGGAGTGTTTTTCCTGTTCTTTGGAATGATTCTCTTTTTTGA  
CAAAGCACTACTGGCTATTGGAAATGTTTTATTTGTAGCCGGCTTGGCTTTTGTAAATTGGTTTAGAAAGAACATT  
CAGATTCTTCTTCCAAAAACATAAAATGAAAGCTACAGGTTTTTTTCTGGGTGGTGTATTTGTAGTCCTTATTGG  
TTGGCCTTTTGATAGGCATGATCTTCGAAATTTATGGATTTTTCTCTTGTTCAGGGGCTTCTTTCCTGTCTGTGT  
TGGCTTTATTAGAAGAGTGCCAGTCCTTGGATCCCCTCTAAATTTACCTGGAATTAGATCATTGTAGATAAAAGT  
TGGAGAAAGCAACAATATGGTATAACAACAAGTGAATTTGAAGACTCATTATAAATATTGTGTTATTTATAAAGT  
CATTTGAAGAATATTCAGCACAAAATTAAATTACATGAAATAGCTTGTAAATGTTCTTTACAGGAGTTTAAACCGT  
ATAGCCTACAAAGTACCAGCAGCAAATTAGCAAAGAAGCAGTGAACACAGGCTTCTACTCAAGTGAACATAAGAAG  
AAGTCAGCAAGCAAACCTGAGAGAGGTGAAATCCATGTTAATGATGCTTAAGAACTCTTGAAGGCTATTTGTGTT  
GTTTTTCCACAATGTGCGAACTCAGCCATCCTTAGAGAACTGTGGTGCCTGTTTTCTTTTCTTTTTATTTTGAAG  
GCTCAGGAGCATCCATAGGCATTTGCTTTTTAGAAAGTGTCCACTGCAATGGCAAAAATATTTCCAGTTGCACTGT  
ATCTCTGGAAGTGATGCATGAATTCGATTGGATTGTGTCATTTTAAAGTATTAAACCAAGGAAACCCCAATTTT  
GATGTATGGATTACTTTTTTTTGTAAACATGGTTAAATAAACTTTTGTGGTTCTTCTGAATCTTAATATTTCA  
AAGCCAGGTGAAAATCTGAACTAGATATTCTTTGTGGAATATGCAAAGGTCATTCTTTACTAACTTTTAGTTAC  
TAAATTATAGCTAAGTTTTGTGAGCAGCATACTCCGGAAGTCTCATACTTCTTGGGAGTCTGCCCTCCTAAGTA  
TCTGTCTATATCATTACCTACGTGTAAGTATTTAAACAAAAAGCATTCTTGACCATGAATGAAGTAGTTTGTTC  
ATAGCTTGTCTCATTGAATAGTATTATTGAAGATACTAAATGATGCAAACCAAATGGATTTTTTCCATGTCATGA  
TGTAATTTTTCTTCTTCTTCTTTTTTTTTAAATTTAGCAGTGGCTTATTATTTGTTTTTCATAAATTAAATA  
ACTTTTGATAATGTTACTTTAAGACATGTAACATGTTAAAAGGTTAAACTTATGGCTGTTTTTAAAGGGCTATT  
CATTTAATCTGAGTTTTCCCTTATTTTTCAGCTTTTTTCCTAGCATATAATAGTCATTAAAGCATGACATATCCTTCA  
TATGATCACTCATCTTGAGTTAATTAGAAAATACCTGAGTTCACGTGCTAAAGTCATTTCACTGTAATAAACTGA  
CTATGGTTTTCTTAAAGAACATGACACTAAAAAAAAGTGGTTTTTTTTCCACCGTTGCTGATTATTAGACAGTAGG  
AAATAGCTGTTTTCTTTAGTTTTACAAGATGTGACAGCTTTAGTGGTAGATGTAGGGAAACATTTCAACAGCCAT  
AGTACTATTTGTTTTACCAGTATTGCACTATTTGTTTTTTTAAAGTTGCAAAGCTTTTTTAATGCATAAAAGT  
ATAATTGAAATCTGTGGTATTTATTTTACAAACATGCTACAAAAATAGATTACAGCTTATTTTATTTTAGTTAA  
ATCTCTTAATACACAGAGAACCTCCAATCTTGCTCATCTAAATAAGGAAAGACTTGGTGTATAGTGTGATGGTTT  
AGTCTTAAGGATTAAGACATTTTTGGTACTTGCATTGACTTACGATGTATCTGTGAAAATGGGATGATATTGAC  
AAATGGAGACTCCTACCTCAATAGTTAATGGAATAATAAGAGGCTACTGTTGTGTCTAATGTTCTTCAAAAAAGT  
AATATCCTCACTTGGAGAGTGTCAAATACATACTTTGAGGATTGACTTTATATAAGGTGCCCTGTAGAACTCTGT  
TACACATATTTTTGACCCATATTATTTACAATGCTTGATAATTCTACCTTTTTAGAGCAAGAATAGTATCTGCT  
AATGTAAGGGACATCTGTATTTAACTCCTTTGTAGACATGAATTTCTATCAAAATGTTCTTTGCACTGTAACAGA  
GATTCCTTTTTTCAATAATCTTAATTCAAAAGCATATTAGACTTGAAAGGGTTTGATAATCTCCAGTCCTTAG  
TAAAGATTGAGAGAGGCTGGAGCAGTTTTAGTTTTAAATGAGTCTGCAGTTAATATCAAAATGTGAGTTTGGGAC  
TGCCTGGCAACATTTATATTTCTTATTTCAGAACCTTGATGAGACTATTTTTAAACATACTAGTCTGCTGATAGA  
AAGCACTATACATCCTATTGTTTTCTTTCTTCCAAAATCAGCCTTCTGTCTGTAACAAAAATGTACTTTATAGAG  
ATGGAGGAAAAGGTCTAATACTACATAGCCTTAAGTGTTTCTGTCTATTGTTCAAGTGTATTTTCTGTAACAGAAA  
CATATTTGGAATGTTTTCTTTTCCCCTTATAAATTGTAATTCCTGAAATACTGCTGCTTTAAAAAGTCCCCTG  
TCAGATTATATTATCTAACAATTGAATATTGTAAATATACTTGTCTTACCTCTCAATAAAAGGGTACTTTTCTAT  
CAAAAAAAAAAAAAAAAAAAAAA

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**FIGURE 100**

MISLTDIQKIGMGLTGFGVFFLFFGMILFFDKALLAIGNVLFVAGLAFVIGLERTFRFFFQKHMKATGFFLGGV  
FVVLIGWPLIGMIFEIYGFFLLFRGFFPVVVGFIRRVFVLGSLLNLPGIRSFVDKVGESNNMV

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**FIGURE 101**

ATTGATTAAAAAGAGATTGCCCTGCAAGGTAAATCAGTTAAAACCAACCTCTCCTGCCCTGAGTGGATAGGTAGG  
GTTAGGGTTGCCAGATGTCACGAAGTTACAGGATGCTCAGTTTTTAAGGTATATCCCTTATACTATAAGGGTTATA  
GTAAAAAATATTTCATTATGTGAAATTCAAATATAACTGGGTATCAGGTATTCTATGTGGCAACCCTAGGTAGGGG  
AGCACAGGTTAGGCAAGCGATTAGAAGATTTGCAGCCTCCAAAGTTTCTGCACCTCGATGGGACACTAGAACAGG  
AAGGCTCCTGGGCCTTTCTGGCTCTGGGAATGAAGCGTGGAAAACCTCCTTAGGCGGGCGCAGTGCTTCAAGTA  
GCCAAGCTCTGACTTCCGAGGGAAGAAAAGGAGGCCATGGGCCTCTGCCAGAGCCATGCTCTGCACTCTGGGGTCA  
GCAGAGTTCAAAACGACCTGCAACGCTCTGGCGCTTAGCTCCTAAAGAGGTCTCCAGTCCAGCGCCGACGGCCAGC  
GGCTAGAGGCCGTCCGCCCCGACTCCAAGATGGCGCCCGCCACAGCTGCCAGGTGTTAAGATGGCGGCGCGGGGCC  
GCGCCCGCGCTCCAGGCTCTCCTCCCCCAGCCTTCTCCTCGGCTGGCAGCAGCACTCGCGTAGCCGTGCGCCGAT  
TGCCTCTCGGCCTGGGCAATGGTCCCGGCTGCCGGTGCAGCAGCGCCCCGCGTCATGCGGCTCCTCGGCTGGTGG  
CAAGTATTGCTGTGGGTGCTGGGACTTCCCGTCCGCGGCGTGGAGGTTGCAGAGGAAAGTGGTCGCTTATGGTCG  
GAGGAGCAGCCTGCTCACCTCTCCAGGTGGGGGCTGTGTACCTGGGTGAGGAGGAGCTCCTGCATGACCCGATG  
GGCCAGGACAGGGCAGCAGAAGAGGCCAATGCGGTGCTGGGGCTGGGCACCCAAGGCGATCACATGGTGTGCTG  
TCTGTGATTCTGGGGAAGCTGAGGACAAAGTGAGTTACAGAGCTAGCGGCGTCACCTGTGGTGCTGGAGGAGCG  
GAGGACTCAAGGTGCAACGTCCGAGAGAGCCTTTTCTCTCTGGATGGCGCTGGAGCACACTTCCCTGACAGAGAA  
GAGGAGTATTACACAGAGCCAGAAGTGCGGAATCTGACGCAGCCCCGACAGAGGACTCCAATAACACTGAAAGT  
CTGAAATCCCCAAAGGTGAACTGTGAGGAGAGAAACATTACAGGATTAGAAAATTTCACTCTGAAAATTTTAAAT  
ATGTCACAGGACCTTATGGATTTTCTGAACCCAAACGGTAGTGACTGTACTCTAGTCTCTGTTTACACCCCGTGG  
TGCCGCTTTTCTGCCAGTTTGCCCCCTCACTTTAACTCTCTGCCCCGGGCATTTCCAGCTCTTCACTTTTGGCA  
CTGGATGCATCTCAGCACAGCAGCCTTTCTACCAGGTTTGGCACCGTAGCTGTTCTAATATTTTATTATTTCAA  
GGAGCTAAACCAATGGCCAGATTTAATCATACAGATCGAACACTGGAAACACTGAAAATCTTCATTTTAAATCAG  
ACAGGTATAGAAGCCAAGAAGATGTGGTGGTAAC TCAAGCCGACCAAATAGGCCCTCTTCCCAGCACTTTGATA  
AAAAGTGTGGACTGGTTGCTTGTATTTTCTTATTCTTTTTAATTAGTTTTATTATGTATGCTACCATTTCGAAC  
GAGAGTATTCGGTGGCTAATTCAGGACAAGAGCAGGAACATGTGGAGTAGTGATGGTCTGAAAGAAGTTGGAAA  
GAGGAACCTCAATCCTTCGTTTCAGAAATTAGTGCTACAGTTTCATACATTTTCTCCAGTGACGTGTTGACTTGA  
AACTTCAGGCAGATTAAGAAGATCATTTGTTGAACAACTGAATGTATAAAAAAAATTATAAACTGGTGTTTTAAC  
TAGTATTGCAATAAGCAAATGCAAAAAATTTCAATAGATGCACTATTCTTGTTTTTTACTGCATGAACGTAATCCA  
GTATTTGGAAAGTAATCCAGTTTGAAATGTGAAGATGTATTCCGGCAGAAATAGTGAGTAGAATGACATGCTTACT  
ATACAGAAGGCAAAAATAGGACTCTCAGGTAATAGTTTAAAGGAAACCTTGATTCTTATATATGTTTAAAGAAGG  
TTAGCTTTCTGTTTCTTTGCAGTTTTTCTTCTAGAGTCCATAGCAGGAAAAGTATGTAACCAGAATTGGTTAGTGT  
GACCCCTCAAGTAGCAAGTGATGGAAAAAAGAGTCAAATACCTTGATGTTTGTGATCTCTAACTCAAAAAATT  
TGAAGTGTTTTAAAGTTGTTTCTGGGTAAGGGAGATGTTAGGAGAAAGGAAATGCTGTAACATAAGCTCAATTATT  
ATCAGTTCTATGCTAACGTATACATTTTAAATCATAGTTACCTAAGCAGCATGCATTAATTGAACCTTAAATGTT  
CCCAGCAGGCTGGTCTCAAACTGCTGACTTCAGGTGATCCACCCGCTCGGCCTCCCAAGGTGTTGGGATTGCAG  
GTGTGAGCCACTGCGCCTGGCCTAAACAAACTTTTTGAAAAGCTGTTTCTAAAAGATTCTTAAATTCAGATATG  
ACAGCTAATTACCTCATATAAATTACTTTTATAC TAATTGTTTCCAGGGTTTTAGAGTAGTTGAATGTTTATTT  
CACAAGGCACCCTAAATTCTATAGAAATAAACCTCAGATGAGTCTC

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**FIGURE 102**

MVPAAGRRPPRVMRLLGWWQVLLWVLGLPVRGVEVAEESGRLWSEEQPAHPLQVGAVYLGEEELLHDPMGQDRAA  
EEANAVLGLGTQGDHVMVLSVIPGEAEDKVSSEPSGVTCGAGGAEDSRCNVRESLFSLDGAGAHFPDREEEYYTE  
PEVAESDAAPTEDSNNTESLKSPKVNCEERNITGLENFTLKILNMSQDLMDFLNPNGSDCTLVLFYTPWCRFSAS  
LAPHFNSLPRAFFPALHFLALDASQHSSLSTRFGTVAVPNILLFQGAKPMARFNHTDRTLLETCLKIFIFNQTGIEAK  
KNVVVTQADQIGPLPSTLIKSVDWLLVFSLFFLISFIMYATIRTESIRWLIPGQEQEHVE

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**FIGURE 103**

GGCACGAGGCCTGGGTTGCGCTGCCGGCCACGTCCCGCGCCGGGCTCAGGCTCCTTCCTACTGTCCGAGGGCC  
ACCAGGCCGCGGGGGCCTGCTGCGCCCGGATGCGTCTGTACTAGAGTGGAGAGTCTACCTTCGTCTCACATGT  
GCCACAAAGGATGGCATGGCCCGGGAGTGCCCCACCACGTGGCTTTACCCCCCTGCAAAGCCAGACTTCGCCCAG  
CGACACAGTGTCAAGCCACAGCTCTCCAAGGAGGAAGATGGTCCAGGCTGGGAGCATCCCCCTTAGCAGCAGCCT  
CTGATCCCTTGGCCAAGCAGGAGGGAACCATTAGCAGCCTGAGGAGCTGGCTGGCTGGGAGCCTCGGGGACCGCC  
CAGCCTTGCTCCCAGCTCACCCACAAGATGTGGACAGCTCTTGCTGCTCATTGATTTTCTCCTTGTCTTATCT  
GAAAGCCATGCGGCATCCAACGATCCACGCAACTTGTGCCCTAACAAAATGTGGAAGGGATTAGTCAAGAGGAAT  
GCATCTGTGGAACAGTTGATAATAAACGTCTGAGGATGTAACCATGGCAGCAGCTTCTCCTGTACATTGACC  
AAAGGGACTTCGGCAGCCCACCTCAACTCTATGGAAGTCACAACAGAGGACACAAGCAGGACAGATGTGAGTGAA  
CCAGCAACTTCAGGAGGTGCAGCTGATGGTGTGACCTCCATTGCTCCACGGCTGTGGCCTCCAGTACGACTGCG  
GCCTCCATTACGACTGCGGCCTCCAGTATGACTGTGGCCTCCAGTGCTCCACGACTGCAGCCTCCAGTACAACCT  
GTGGCCTCCATTGCTCCACGACTGCAGCCTCCAGTATGACTGCGGCCTCCAGCACTCCCATGACACTTGCACTC  
CCCGCGCCACGTCCACTTCCACAGGGCGGACCCGTCCACTACCGCCACTGGGCATCCATCTCTCAGCACAGCC  
CTCGCACAAGTGCCAAAGAGCAGCGCGTTGCCAAGAAGCAACCCCTGGCCACATTGGCCACACGTGCTCAGACT  
GTAGCGACCACAGCAAACACAAGCAGCCCCATGAGCACTCGTCCAAGTCCTTCCAAGCACATGCCAGTGACACC  
GCGGCAAGCCCTGTACCCCTATGCGTCCCCAAGCACAAGGTCCCATTAGCCAGGTGTCAGTGGACCAGCCTGTG  
GTTAACACAACAAATAAATCCACACCCATGCCCTCAAACACAACCCAGAGCCCGCCCCACCCACAGTGGTG.  
ACCACCACCAAGGCACAAGCCAGGGAGCCAAGTCCAGCCAGTGCCAGTACCTCACACCAGCCCAATCCCTGAG  
ATGGAGGCCATGTCCCCACGACACAGCCAAGCCCATGCCATATACCCAGAGGGCCGCTGGGCCAGGCACATCC  
CAGGCACCGGAGCAGGTAGAGACTGAAGCCACACCAGGTACTGATTCCACTGGGCCAACACCCAGGAGCTCAGGG  
GGCACTAAGATGCCAGCCACGGACTCGTGCCAGCCAGCACCCAAGGCCAGTACATGGTGGTCACCACTGAGCCC  
CTCACCAGGCCGTGGTAGACAAAACCTCTCCTTCTGGTGGTGTGTTACTCGGGGTGACCCTTTTCATCACAGTC  
TTGGTTTTGTTTGCCTGCAGGCCTATGAGAGCTACAAGAAGAAGGACTACACCCAGGTGGACTACTTAATCAAC  
GGGATGTATGCGGACTCAGAAATGTGAGGGGGGCGGGGGCCTGGCGGGAGGCCTGGCCCCCTTCTCGTCCTTTCC  
TTTTGCCTTTGAGACCAAACCAAGTGCTTCCAAATTCTTTTGGTGCAATTGAGGAGATATGCCAGATGCTTAAAC  
ACATTTAATTGCTGTGAGATTAATTCCATGATCACTAAAGAGTTGCTGCTTTTTTCATATTTATTTTTGTAAATG  
ATTCTGTGCCAGGAGCAGCTGGGGGTTCACCTCAGGGTGGGGCGGGCAGGACCCCGTCTCCCAGGTGTCGGA  
GCCTGACCTGAATTAAAGTACTGACTGCTCGCC



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**FIGURE 104**

MWTALVLIWIFSLSLSESHAASNDPRNFVPNKMWKGLVKRNASVETVDNKTS  
EDVTMAAASPVTLTGKTSAAHLN  
SMEVTTEDTSRTDVSEPATSGGAADGVTSIAPTAVASSTTAASITTAASSMTV  
ASSAPTAAASSTTVASIAPTTA  
ASSMTAASSTPMTLALPAPTSTSTGRTPSTTATGHPSLSTALAQVPKSSALP  
RTATLATLATRAQTVATTANTSS  
PMSTRPSPSKHMPSDTAASPVPMPMRPQAQGPISQVSVDQPVVNTTNKSTPMP  
SNTTPEPAPTPTVVTTTKAQARE  
PTASPVVPHTSPIPEMEAMSPITQPSPMPYTQRAAGPGTSQAPEQVETEATP  
GTDSTGPTPRSSGGTKMPATDS  
CQPSTQGQYMVVTTTEPLTQAVVDKTL LLVLLLVLTFLITVLVLFALQAYES  
YKKKDYTQVDYLINGMYADSEM